LEGISLATIVE RESEARCH COMMISSION

PREVENTATIVE MEDICINE

REPORT TO THE 1985 GENERAL ASSEMBLY OF NORTH CAROLINA 1986 SESSION

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STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
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June 1, 1986

TO THE MEMBERS OF THE 1985 GENERAL ASSEMBLY (1986 Session):

The Legislative Research Commission herewith reports to the 1985 General Assembly (1986 Session) on the matter of Preventative Medicine. The report is made pursuant to Chapter 790 of the 1985 General Assembly (1985 Session).

This report was prepared by the Legislative Research Commission's Committee on Preventative Medicine and is transmitted by the Legislative Research Commission for your consideration.

Respectfully submitted,

Liston B. Ramsey — J. J. (Monk) Harrington

Cochairmen
Legislative Research Commission

LEGISLATIVE RESEARCH COMMISSION

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PREFACE

The Legislative Research Commission, authorized by Article 6B of Chapter 120 of the General Statutes, is a general purpose study group. The Committee is co-chaired by the Speaker of the House and the President Pro Tempore of the Senate and has five additional members appointed from each house of the General Assembly. Among the Commission's duties is that of making or causing to be made, upon the direction of the General Assembly, "such studies of and investigation into governmental agencies and institutions and matters of public policy as will aid the General Assembly in performing its duties in the most efficient and effective manner" G.S. 120-30.17(1).

At the direction of the 1985 General Assembly, the Legislative Research Commission has undertaken studies of numerous subjects. These studies were grouped into broad categories and each member of the Commission was given responsibility for one category of study. The co-chairmen of the Legislative Research Commission, under the authority of General Statute 120-30.10(b) and (c), appointed committees consisting of members of the General Assembly and the public to conduct the studies. Co-chairmen, one from each house of the General Assembly, were designated for each committee.

The study of preventive health was authorized by Section 1(8) of Chapter 790 of the 1985 Session Laws (1985 Session). That act states that the Commission may consider House Bill 1052 in determining the nature, scope and aspects of the study. Section 1 of House Bill 1052 reads: "The Legislative Research Commission may study innovative ways to finance a comprehensive health promotion, disease prevention, education program throughout North Carolina." Relevant portions of Chapter 790 and House Bill 1052 are included in **Appendix I**.

The Legislative Research Commission grouped this study in its Human Resources area under the direction of Senator Ollie Harris. The Committee was chaired by Representative Jeff H. Enloe Jr. and Senator William N. Martin. The full membership of the Committee is listed in **Appendix II** of this report.

COMMITTEE PROCEEDINGS

The Committee's study proceeded from a consideration of the state's needs in the field of preventive health, to a consideration of what programs should be established to deal with those needs and of how those programs should be financed.

As a tool to focus the committee's task, the co-chairmen requested a presentation from the Department of Human Resources (DHR) answering questions set out in a letter to Phillip J. Kirk, secretary of the department. (See **Appendix III.**) The Department of Human Resources, particularly Dr. Ronald H. Levine, the state health director, had been involved in the genesis of the study when Rep. Sidney Locks introduced House Bill 1052. In the letter requesting a presentation, the co-chairmen asked Secretary Kirk to assign someone to answer questions about the preventable causes of death and disability in the state, about how (if at all) the task of preventing those causes is now being carried out, about how it should be carried out, and about how a health promotion/disease prevention program might be financed in North Carolina.

First Meeting -- December 18

At the Committee's first meeting December 18, Rep. Sidney Locks, sponsor of House Bill 1052 and a member of the Committee, spoke of his intention in initiating the study: a desire to bring about healthier lifestyles to reduce the incidence of lifestyle-related causes of death and disability. Dr. Levine, representing the DHR, made a presentation that dealt primarily with the problem of preventable causes of death and disability in North Carolina and the efficacy in general of health promotion/disease prevention in attacking the problem. (See **Appendix IV.**)

The Committee also heard from the state Medical Society and from the Center for Health Promotion and Disease Prevention at the University of North Carolina at Chapel Hill. The Medical Society was represented by Dr. Thad Wester, the public health director of Robeson County. (Rep. Locks, also of Robeson County, had told the Committee that Dr. Wester had approached him during the 1985 Session about introducing House Bill 1052.) Dr. Wester said he thought the public health system was best equipped to tackle the health promotion/disease prevention effort. The Center for Health Promotion and Disease Prevention is a joint effort of the health-

professional schools at Chapel Hill to address the need for prevention. Dr. O. Dale Williams, the Center's director, spoke, as did a representative of each of the parent schools (dentistry, medicine, nursing, pharmacy and public health). Each discussed more or less generally his discipline's interest in prevention.

At the end of the first meeting, Senator Martin and Rep. Locks indicated a desire to hear in more detail at the next meeting about the state's current efforts to address its prevention needs. Rep. Locks expressed particular interest in knowing how the state was approaching the top three preventable causes of death: cardiovascular disease, cancer, and accidents.

Second Meeting -- January 30

The Committee's second meeting on January 30 consisted in part of presentations designed to satisfy the requests for more information about current preventive efforts in North Carolina. DHR, represented by Dr. Georjean Stoodt, discussed the efforts of state government inside and outside the Department. (See **Appendix V.**) The Capital Health Systems Agency, represented by Ms. Lynda Bryant-Comstock, discussed efforts outside state government. (See **Appendix VI-B.**)

In addition to the descriptive presentations, the Committee heard a variety of speakers who stated their groups' interest in health promotion and made proposals for legislative action. At the end of the second meeting, the co-chairmen requested that the Committee counsel, William R. Gilkeson Jr., make a presentation to the Committee of all the proposals made to the Committee by speakers and by Committee members. Members and others were asked to submit their proposals in writing in advance of the meeting of March 6. Also, Rep. Locks asked for information about other states' efforts to encourage wellness programs among their own employees and in private industry, and for information about the geographic distribution of preventable health problems in North Carolina. (For data about geographic distribution, see Leading Causes of Mortality, North Carolina Vital Statistics, 1984 Volume II, a publication of the State Center for Health Statistics, Department of Human Resources, not included in this Legislative Research Commission report.)

Third Meeting -- March 6

The Committee's third meeting on March 6 was devoted to a discussion of proposals already made to the committee and to committee decisions of what to recommend to the 1985 General Assembly, 1986 Regular Session. Staff counsel presented an outline of proposals made. Dr. Levine discussed in more detail a $5 million proposal for a comprehensive promotion/prevention program put forth by his Division of Health, several local health directors, and several health officials at the University of North

Carolina. (See **Appendix VII-A** for the original proposal, **VII-B** for a memorandum from Committee counsel requesting more information, and **VII-C** for a more detailed proposal.) And Co-chairman Enloe called on Dr. Levine to discuss a suggestion put forth by Mr. Enloe to finance the program with revenue to be gained by a 2/3 percent premium tax increase on non-profit health plans and a 1 percent premium tax imposed for the first time on Health Maintenance Organizations.

The Committee, after discussion, indicated an interest in possibly recommending the following to the 1985 General Assembly, 1986 Regular Session:

1.) the proposal of Dr. Levine and others for a comprehensive promotion/prevention program in the public health system (see **Appendix VII**),
2.) the proposal of Rep. Enloe to fund the program through a premium tax on health maintenance organizations and an increased tax on non-profit health plans (see **Appendix XVI** for letter from Rep. Enloe),
3.) the amendment of the Teachers and State Employees Comprehensive Health Benefits Plan to pay for services to heart patients at all state-certified Cardiac Rehabilitation Centers, not just those in hospitals, and
4.) the concept of a proposal by the Nurses Association that health/accident insurance companies be required to make direct reimbursements to nurse practitioners who specialize in preventive care (see **Appendix XIV-A** for Nurses Association statement to the Committee).

The Committee asked the staff to draft bills for the first three items mentioned, and to include them in a draft report for the Committee's approval at its fourth meeting. The Committee also directed the staff to include in the report an outline of proposals similar to that presented at the third meeting on March 6, to serve as an indication of what has come before the Committee and what may be considered in the future. That outline of proposals appears in this report at Page 7.

Fourth Meeting -- April 17, 1986

At its fourth meeting on April 17, the Committee heard from Rep. Bertha Holt and from Al Proctor of the Department of Public Instruction on health education coordinators.

The Committee heard from opponents of the premium tax proposal, representing Blue Cross-Blue Shield and two health maintenance organizations.

After discussion, the Committee approved a motion made by Senator A. D. Guy that the Committee make an Interim Report to the 1985 General Assembly, Regular Session 1986, that would include a summary of the Committee's proceedings and an outline of proposals that have been made to the Committee (as contained in Pages 1-12 of the Draft Report), but would not include findings or recommendations.

The Committee voted to request continuance of the study until the 1987 General Assembly, and funding therefor.

OUTLINE OF PROPOSALS

The Committee at its March 6 meeting indicated its desire that this Interim Report should include an outline of proposals that had been made or suggested to the Committee as an indication of what the Committee might consider in the future. The outline here is substantially that which the staff presented to the Committee at its March 6 meeting. The outline contains not only proposals made by members and speakers, but also references to initiatives and proposals in other states. The outline is divided into four parts: proposals for program, proposals for financing program, proposals for incentives, and proposals for direct regulation.

I. Proposals for Program

A. Set up a comprehensive health promotion/disease prevention program statewide.

1. Rely on the local health departments (LHDs) to serve as the core of a program, coordinating local efforts with direction, training and evaluation from the Division of Health Services of DHR in Raleigh. Each LHD would receive a base-level grant based on a formula, with further grants available to others on a competitive basis. Appropriate $5 million for the entire program. (See proposal of Dr. Levine and others, **Appendix VII**. See also proposal of Dr. Joseph Holliday, a Committee member and a local health director, **Appendix VIII**. See also proposal of American Association of Retired Persons--AARP, **Appendix IX**.)

   a. Set definite goals and criteria for risk reduction, and avoid giving formula-type grants to LHDs. (See statement of Dr. Gordon DeFriese, **Appendix X**. But see also Dr. DeFriese's participation in Levine proposal, **Appendix VII**.)

b. Add program modules to LHDs, and increase the number of program modules with time. (See statement of UNC Center for HPDP, **Appendix XI.**)

c. Appropriate money for DHS to contract with the Universities for technical assistance and evaluation. (See Holliday proposal, **Appendix VIII**, and AARP proposal, **Appendix IX.**)

d. Let UNC Center for HPDP and its affiliated schools at Chapel Hill develop the information system to plan and evaluate the program. (See HPDP Center statement, **Appendix XI.**)

e. Give incentives to local state-supported agencies (including but not limited to LHDs) to coordinate local efforts. (See statement of Capital Health Systems Agency, **Appendix VI-A.**)

2. Establish Preventive Health Centers accessible to every North Carolinian, preferably in under-utilized hospitals or other existing health-care facilities. Each Center should offer a variety of services, free or at minimal charge, and should attempt to link up each person who receives those services with a regular provider of primary health care. (See proposal of Senator William N. Martin, **Appendix XII**. See also DeFriese statement on need for link-up with a provider, **Appendix X**. But see statement of N.C. Society for Public Health Education, which cautioned against duplication of LHD efforts, **Appendix XIII.**)

3. Have DHR identify populations at high risk for preventable health problems and develop outreach methods to make them aware of their risks and solutions. Tailor the message to the audience, and do not ignore the poor, the elderly and minorities. (See Levine proposal, **Appendix VII**; Martin proposal, **Appendix XII**; DeFriese proposal, **Appendix X**; and Holliday proposal, **Appendix VIII**. See also reference to N.C. General Baptist State Convention program in Capital HSA statement, **Appendix VI-B.** See also Connecticut High Blood Pressure Program.)

B. Increase the number of health education coordinators in the public schools. (See Capital HSA proposal, **Appendix VI-C.**)

C. Fund a health education coordinator for the Department of Community Colleges so that the community colleges and technical institutes can be fully utilized to provide low-cost courses in wellness to individuals and employee groups. (See Capital HSA proposal, **Appendix VI-D.**)

D. Give financial encouragement to the state's Cardiac Rehabilitation Centers (public and private) to extend their efforts into health promotion/disease prevention for high-risk groups. Perhaps give 12-month funding to one or two regional centers for pilot programs. (See Capital HSA proposal, **Appendix VI-E.**)

E. Increase funding for school nurses, and do more screening and health promotion in the schools. (See Nurses proposal, **Appendix XIV.**)

F. Increase programs for prenatal care. (See Nurses proposal, **Appendix XIV.**)

G. Increase community nursing centers for the elderly. (See Nursing proposal, **Appendix XIV.**)

H. Establish pilot programs addressing seat belts, alcohol and cars, alcohol and guns, and smoking. (See statement of Dr. George Johnson of Emergency Medical Services Council, minutes to December 18 meeting.)

I. Find ways to encourage healthy lifestyles among state employees. (Suggestion by Rep. Locks at January 30 meeting; see minutes. The Committee was also informed of programs in other states, such as Utah, Hawaii and Massachusetts. References: Toff, Gail E., Intergovernmental Health Policy Project, State Health Promotion and Disease Prevention Initiatives; Dunlap, Dianne, General Research Division of N.C. General Assembly, Survey of Selected State Employee Benefits in Other States; Rosen, Dr. Robert, Washington Business Groups for Health, Notes from testimony to committee of Nevada state legislature.

1. Write into the Teachers and State Employees Health Care Plan benefits for services to heart patients in all state-certified Cardiac Rehabilitation Clinics, not just those in hospitals. (Recommendation of Dr. Sarah Morrow, medical director of EDS Federal Corp., which administers the plan. See related proposal of Capital HSA, **Appendix VI-E.**)

2. Write into the Teachers and State Employees Health Care Plan coverage for routine physical examinations, or provide free Health Risk Analysis to state employees. (See programs in Utah, Massachusetts and Tennessee.)

J. Channel funds through DHR to the historically black colleges and universities for projects addressing the special health problems and needs of blacks. (See

proposal of Old North State Medical Society, **Appendix XV.**)

K. Study the matter further. For example, appoint a commission to define health promotion/disease prevention goals for North Carolina by the year 2000, and name a permanent steering committee with a spectrum of public members to monitor labors toward those goals and make recommendations. (See experience of Texas.)

II. Recommendations for Financing of Program

A. Appropriate money from General Fund.

B. Use federal money from Preventive Health Block Grant. (But see minutes of January 30 meeting for remarks of General Assembly's Fiscal Research staff on prospects for reduction of block grant under Gramm-Rudman-Hollings Act.)

C. Levy dedicated revenues (earmarked taxes)

1. Place a one-percent tax on health insurance premiums for Health Maintenance Organizations (HMOs), and increase the premium tax for Chapter 57 non-profit health insurance plans (such as Blue Cross-Blue Shield). (See letter of Rep. Jeff H. Enloe Jr., **Appendix XVI**. See also minutes of December 18 meeting for statement of Dr. Ben Barker of UNC Dental School.)

2. Place a half-cent tobacco products, earmarking the revenues for health promotion/disease prevention. (See Dr. Barker's statement in December 18 minutes. See also statement of Dr. Gerard Musante, **January 30 minutes**; and AARP proposal, **Appendix IX**. See experience of Kentucky, a tobacco-growing state which taxes tobacco to fund an Institute on Tobacco and Health for research at the state university; of Michigan, where a bill to earmark cigarette tax money has been altered to tax smokeless tobacco and cigars instead; of Utah, an anti-smoking state where an effort to increase the cigarette tax for prevention programs failed; of Minnesota, where cigarette tax money is earmarked for a Non-Smoking and Disease Prevention effort; and of Nebraska and Idaho, where cigarette-tax revenues are earmarked for cancer research.)

3. Add $1 to the automobile registration fee, earmarking it to prevention programs. (See December 18 minutes for Dr. Barker's statement.)

4. Earmark part of tax on alcoholic beverages to prevention programs. (See December 18 minutes for Dr. Barker's statement.)

5. Tax over-the-counter weight-loss remedies, and earmark revenues for prevention. (See Musante statement, January 30 minutes.)

6. Establish a state lottery. (Proposal of Rep. James F. Richardson, a Committee member.)

D. Offer a checkoff on the state income-tax return to taxpayers who wish to contribute to a comprehensive statewide prevention program. (See Nurses proposal, **Appendix XIV.**)

E. Set up a foundation. (See December 18 minutes for Dr. Barker's statement.)

III. Recommendations for Incentives

A. Give income-tax credit to businesses for money they spend on wellness programs. For example, give company a credit equal to 25 percent of costs incurred, with a cap of $100/employee/year. Make sure the companies' programs conform to standards and are accessible to all employees, not just executives. (See Capital HSA proposal, **Appendix VI-F.** See also unsuccessful S.B. 1618 by U.S. Sen. William Cohen of Maine, and S.B. 142 by Sen. Diane Watson, still pending in California legislature.)

1. Give tax or reimbursement incentives to nursing-home industry to provide prevention programs for the well elderly in the community. (See Nurses proposal, **Appendix XIV.**)

B. Give indirect tax incentives (or indirect regulation) to businesses through strings attached to deductions for premium payments. Use as leverage the deduction that a business may take for the premiums it pays for its employees' group health insurance. Make that deduction contingent on the inclusion in the group health plan of benefits for preventive health care. (Most insurance plans now limit benefits to treatment of a diagnosed illness.) (See Nurses proposal, **Appendix XIV.** See also CHIRP proposal by U.S. Sen. John Chaffee of Rhode Island, which is designed to encourage benefits for preventive care for children.)

C. Give state assistance to businesses in establishing and operating wellness programs through 1.) the example of state's programs for its own employees, 2.) state fee-supported check-up services at private worksites such as

the Rhode Island Wellness Wagon, 3.) state convening of conferences on wellness for private employers, as in Hawaii, 4.) state publication of a registry of wellness services available to private employers, as in Hawaii.

D. Use the rate regulation process to encourage health-and-accident insurance companies to give rate differentials to individuals who engage in healthy and avoid unhealthy lifestyles.

E. Give licensing credits to physicians and other health-care providers who take continuing education courses in preventive techniques. (See Louisiana program.)

IV. Recommendations for Direct Regulation

A. Mandate insurance coverage.

1. Require all health/accident policies to include benefits for further diagnosis needed to identify resulting health problems to which an insured person may be susceptible due to a high-risk condition already diagnosed. Include both non-profit health plans and HMOs in the requirement, and write such benefits into the Teachers and State Employees Comprehensive Health Benefit Plan. (See Senator Martin's proposal, **Appendix XII**. See also N.C. SOPHE statement supporting Martin proposal, **Appendix XIII**.)

2. Require that health-and-accident policies include direct reimbursements to nurse practitioners who specialize in preventive care. (See Nurses proposal, **Appendix XIV-A**.)

3. Require that health/accident policies reimburse persons who provide psychological services in weight control. (See Musante statement, **January 30 minutes**.)

4. Require physicians to take Medicaid patients as condition of licensure. (See S.B. 294 by State Sen. Edward L. Burke, introduced in 1985 Massachusetts Legislature, and now in abeyance pending negotiations between Governor Dukakis and state Medical Society.)

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 1985
RATIFIED BILL

CHAPTER 790
SENATE BILL 636

AN ACT AUTHORIZING STUDIES BY THE LEGISLATIVE RESEARCH COMMISSION, MAKING TECHNICAL AMENDMENTS THERETO, AND TO MAKE OTHER AMENDMENTS.

The General Assembly of North Carolina enacts:

Section 1. Studies Authorized. The Legislative Research Commission may study the topics listed below. Listed with each topic is the 1985 bill or resolution that originally proposed the issue or study and the name of the sponsor. The Commission may consider the original bill or resolution in determining the nature, scope and aspects of the study. The topics are:

(1) Continuation of the Study of Revenue Laws (H.J.R. 17-Lilley),

(2) Continuation of the Study of Water Pollution Control (H.J.R. 141-Evans),

(3) Adolescent Sexuality Teaching (H.J.R. 275-Jeralds),

(4) Continuation of the Study on the Problems of the Aging (H.J.R. 322-Greenwood),

(5) Continuation of the Study of Municipal Incorporations (H.J.R. 389-Greenwood),

(6) School Discipline (H.J.R. 861-Colton),

(7) Bail Bondsmen and Bail Bond Forfeiture (H.B. 967-Watkins),

(8) Preventative Medicine (H.B. 1052-Locks),

(9) Life Care Arrangements (H.B. 1053-Locks),

(10) State Personnel System (H.B. 1064-Wiser),

(11) Long-Term Health Care Insurance (H.B. 1103-Locks),

(12) Itinerant Merchants (H.B. 1170-Lancaster),

(13) Manufactured Housing Zoning (H.B. 1178-Ballance; S.B. 636-Plyler),

(14) Interest Rate Regulation (H.J.R. 1227-Evans),

(15) Underground Storage Tank Leakage Hazards and other ground water hazards (H.B. 1281-Locks),

(16) Mental Patient Commitments (H.J.R. 1313-Miller),

(17) High-Level Radioactive Waste Disposal (H.B. 1373-Diamont; S.B. 655-Hipps),

(18) Stun Guns (H.J.R. 1390-McDowell),

(19) Continuation of the Study of Water Quality in Haw River and B. Everett Jordan Reservoir (H.J.R. 1393-Hackney),

(20) Authority of Boards of County Commissioners in Certain Counties over Commissions, Boards and Agencies (H.J.R. 1405-Holroyd),

(21) Superintendent of Public Instruction and State Board of Education (H.J.R. 1412-Nye),

(22) Rental Referral Agencies (H.B. 1421-Stamey),

(23) Child Abuse Testimony Study (S.B. 165-Hipps),

(24) Home Schooling Programs (S.J.R. 224-Winner),

(25) Pretrial Release (S.J.R. 297-Winner),

(26) Inmate Substance Abuse Therapy Program (S.J.R. 317-Plyler),
(27) Inmate Work-Release Centers (S.B. 406-Swain),
(28) Community College System (S.B. 425-Martin),
(29) Community Service Alternative Punishment and Restitution (S.B. 495-Swain),
(30) State Employee Salaries and Benefits (S.B. 514-Jordan),
(31) State Infrastructure Needs (S.B. 541-Royall),
(32) Commercial Laboratory Water Testing (S.B. 573-Taft),
(33) Outdoor Advertising (S.B. 611-Thomas, R.P.),
(34) Premium Tax Rate on Insurance Companies (S.B. 633-Hardison)
(35) Continuation of the Study of Child Support (S.B. 638-Marvin),
(36) Local Government Financing (S.B. 670-Rauch),
(37) Medical Malpractice and Liability (S.B. 703-Taft),
(38) Marketing of Perishable Food (S.B. 718-Basnight),
(39) Child Protection (S.B. 802-Hipps),
(40) Legislative Ethics and Lobbying (S.B. 829-Rauch),
(41) Satellite Courts (S.B. 850-Barnes),
(42) Substantive Legislation in Appropriations Bills (S.B. 851-Rand),
(43) School Finance Act (S.B. 848-Taft).

Sec. 2. Transportation Problems at Public Facilities. The Legislative Research Commission may identify and study transportation problems at public transportation facilities in North Carolina.

Sec. 2.1. The Legislative Research Commission may study the feasibility of the prohibition of investment by the State Treasurer of stocks of the retirement systems listed in G.S. 147-69.2(b)(6), or of the assets of the trust funds of The University of North Carolina and its constituent institutions deposited with the State Treasurer pursuant to G.S. 116-36.1 and G.S. 147-69.2(19) in a financial institution that has outstanding loans to the Republic of South Africa or in stocks, securities, or other obligations of a company doing business in or with the Republic of South Africa.

Sec. 3. Reporting Dates. For each of the topics the Legislative Research Commission decides to study under this act or pursuant to G.S. 120-30.17(1), the Commission may report its findings, together with any recommended legislation, to the 1987 General Assembly, or the Commission may make an interim report to the 1986 Session and a final report to the 1987 General Assembly.

Sec. 4. Bills and Resolution References. The listing of the original bill or resolution in this act is for reference purposes only and shall not be deemed to have incorporated by reference any of the substantive provisions contained in the original bill or resolution.

Sec. 5. The last sentence of G.S. 120-19.4(b) is amended by deleting the citation "G.S. 5-4" and inserting in lieu thereof the following: "G.S. 5A-12 or G.S. 5A-21, whichever is applicable".

Sec. 6. G.S. 120-99 is amended by adding a new paragraph to read:

"The provisions of G.S. 120-19.1 through G.S. 120-19.8 shall apply to the proceedings of the Legislative Ethics Committee as if it were a joint committee of the General Assembly, except that the chairman shall sign all subpoenas on behalf of the Committee.

Sec. 7. G.S. 120-30.17 is amended by adding a new subsection to read:

"(9) For studies authorized to be made by the Legislative Research Commission, to request another State agency, board, commission or committee to conduct the study if the Legislative Research Commission determines that the other body is a more appropriate vehicle with which to conduct the study. If the other body agrees, and no legislation specifically provides otherwise, that body shall conduct the study as if the original authorization had assigned the study to that body and shall report to the General Assembly at the same time other studies to be conducted by the Legislative Research Commission are to be reported. The other agency shall conduct the transferred study within the funds already assigned to it."

Sec. 8. This act is effective upon ratification.

In the General Assembly read three times and ratified, this the 18th day of July, 1985.

ROBERT B. JORDAN III

Robert B. Jordan III
President of the Senate

LISTON B. RAMSEY

Liston B. Ramsey
Speaker of the House of Representatives

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 1985

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HOUSE BILL 1052

Short Title: LRC Health Study. (Public)

Sponsors: Representatives Locks; Ballance, Barnhill, Beard, Blue,*

Referred to: Appropriations.

May 15, 1985

A BILL TO BE ENTITLED

AN ACT TO AUTHORIZE THE LEGISLATIVE RESEARCH COMMISSION TO STUDY INNOVATIVE APPROACHES TO FINANCE THE HEALTH PROMOTION, DISEASE PREVENTION EFFORT IN NORTH CAROLINA.

Whereas, the North Carolina age-adjusted mortality rates for cerebrovascular disease, motor vehicle accidents, other accidents and heart disease are substantially above those for the nation; and

Whereas, the State's age-adjusted cancer mortality rate is increasing faster than that for the nation; and

Whereas, one-third of North Carolina annual deaths are premature adult deaths occurring to persons between the ages of 18 and 64, equivalent to approximately 16,500 deaths per year or 43 deaths per day; and

Whereas, these deaths rob North Carolina of valuable resources because they occur during the productive years of life, and cause hardship on family and friends; and

Whereas, 194,555 person years were lost prematurely to those in the adult working population of North Carolina in 1981; and

Whereas, the economic impact of these deaths in terms of loss of potential income, state, federal and general sales tax loss, is an estimated two billion one hundred million dollars ($2,100,000,000); and

Whereas, morbidity and disability from chronic diseases and accidents are responsible for substantial medical care costs and lost productivity among the work force, not to mention the personal loss, grief, and financial disruption experienced by families; and

Whereas, it is estimated that more than fifty percent (50%) of mortality is related to causes that are preventable; and

Whereas, efforts to prevent morbidity and mortality from chronic diseases and accidents require the active involvement of communities, including public health, the medical community, business, industry, and voluntary agencies; and

Whereas, the prevention of unnecessary morbidity and mortality require comprehensive, planned, and systematically implemented health promotion and education efforts directed at the community and individuals; and

Whereas, the North Carolina Public Health System has responsiblity for the public health but lacks the financial resources to undertake a comprehensive health promotion and disease prevention effort; and

Whereas, a comprehensive health promotion and disease prevention effort can improve the health status of North Carolinians and can provide affordable economic return to the State; Now, therefore,

The General Assembly of North Carolina enacts:

Section 1. The Legislative Research Commission may study innovative ways to finance a comprehensive health promotion, disease prevention, education program throughout North Carolina. The Legislative Research Commission may make an interim report to the 1985 General Assembly, Regular Session, and may make a final report to the 1987 General Assembly.

Sec. 2. This act is effective upon ratification.

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*Additional Sponsors: Bowman, DeVane, Edwards, Fitch, Hasty, Holt, Jeralds, Jones, Kennedy, Nye, Pool, Richardson, Tyson, E. Warren, C.D. Woodard.

PREVENTATIVE MEDICINE

1985 - 1986

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STATE OF NORTH CAROLINA

LEGISLATIVE RESEARCH COMMISSION

STATE LEGISLATIVE BUILDING

RALEIGH 27611

November 27, 1985

Mr. Phillip J. Kirk
Secretary of Human Resources
Albemarle Building
Raleigh, North Carolina 27611

Dear Mr. Kirk:

We have been appointed co-chairmen of the Legislative Research Commission's Study Committee on Preventative Medicine, authorized by the 1985 General Assembly.

Our committee is charged with studying innovative ways to finance a comprehensive health promotion, disease prevention program throughout the state. We are authorized to make an interim report to the short session of the General Assembly in 1986 and a final report to the 1987 General Assembly.

Pursuant to our charge, we intend to hold our first meeting Wednesday, December 18, at 10:00 a.m. in Room 1425 of the State Legislative Building. Please assign someone in your department to make a presentation to our committee orally and in writing at that meeting. Please make sure that the following questions are answered in the presentation:

1. Please list the causes of death and disability, long-term or permanent, that can feasibly be prevented by health promotion and disease prevention programs.

2. For each of the above causes of death and long-term or permanent disability, please provide the most recent North Carolina rate and the national rate. Please also provide, for each such cause, the rate of growth or decline over a statistically significant number of years, for North Carolina and the nation. Please give breakdowns of all the above figures by gender, race, age group and socio-economic class.

3. Please quantify and document the impact of these causes of death and disability on the state's economy.

4. How does state law assign responsibility for public health?

5. Please describe, for each cause of death or disability listed, what your department and local health departments are doing in the way of health promotion/disease prevention. Describe the level of funding and source of funds for the effort against each of the causes listed, and for your overall health promotion/disease prevention effort.

6. Please describe in detail the health promotion/disease prevention efforts being made outside your department and the public health system. Please describe this effort as a whole, and also analyze it as it affects each cause of death or disability listed above. Please evaluate its effectiveness. How is it financed? Please tell how efforts inside and outside the public health system are being coordinated. Is the coordination adequate? What coordination is necessary?

7. Please describe, for each cause listed as well as overall, what you believe is the best realistic program of health promotion/disease prevention to reduce the mortality and disability rate. Please provide any statistical evidence from North Carolina or elsewhere that supports your belief. Also please provide any statistic information that would be evidence against your belief. Include efforts inside and outside the department and the public health system.

8. How much money does your department and the public health system need to put into effect the best realistic program of health promotion/disease prevention--in each cause area and overall. Please answer the same question for programs you believe are needed outside the department.

9. In answering Questions 5-8, please discuss school health and health education, mental health and drug abuse, in-home care, and the potential growth or decline in the supply of health care providers.

10. Please list suggested methods to finance a comprehensive health promotion/disease prevention program beyond what now exists. For each method suggested, please:

- describe the government action necessary (such as legislation, referendum or constitutional amendment);

- estimate the revenue yield in North Carolina;

- give examples of other jurisdictions where the method has been tried and relate the experience in those jurisdictions as to revenue yield, public reaction and political repercussions resulting from the use of the method.

We emphasize the committee's need to have your response in writing, as well as orally, early enough before the committee meeting that copies may be made available to the committee members.

We greatly appreciate your cooperation and look forward to working with your department in this important area.

Sincerely,

Jeff H. Enloe, Jr.

Rep. Jeff H. Enloe, Jr.
Co-chairman

William N. Martin

Sen. William N. Martin
Co-chairman

JHEjr/WNM:wgjr:m

cc: Dr. Ronald H. Levine, M. C.,
Director, Division of Health Services

Mr. William R. Gilkeson, Jr., Committee Cousel

Presentation to the Legislative Research
Commission's Study Committee on Preventive Medicine
Division of Health Services
Department of Human Resources
December 18, 1985

Table of Contents

Executive Summary

*The leading causes of death in North Carolina are:

-cardiovascular disease

-cancer and

-accidents

*These causes of death accounted for the following numbers of premature years of life lost in North Carolina in 1984:

Disease	Years of Life Lost in 1984
cardiovascular disease	110,170
cancer	92,135
accidents	82,245
TOTALS	284,545

*Modifiable and preventable lifestyle and environmental factors contribute largely to these leading causes of death. The Centers for Disease Control estimates the following relative contributions are made to these leading causes of death.

Lifestyle Factors	Environment	Human Biology	Health Care Delivery
51%	19%	20%	10%

*Lifestyle risk factors include, for example:

-what we eat
-whether or not we smoke
-how we maintain our weight
-what our drinking habits are
-whether we buckle our seat belts
-how we handle excess stress
-whether or not we drink and drive
-our safety practices at home and work

*These behavioral lifestyle factors are more complex to change than simply giving someone the information about what he or she "should do." Our behaviors are influenced by our social and physical environments.

*Health promotion may involve any combination of educational, organizational, economic and environmental interventions to encourage behavior and modify environments conducive to health.

*A variety of well planned health promotion interventions have shown to be effective in modifying health related risk factors. Health promotion potentially may produce cost savings in certain cases.

*Health promotion is a solution whose time has come; yet funding for health promotion is inadequate to make a broad impact.

Of the factors contributing to the leading causes of death, corresponding national funding proportional to each of these factors is shown below:

Determinants of Health

Lifestyle Factors	Environmental Factors	Human Biology	Health Care Delivery
51%	19%	20%	10%

Corresponding Investments in Health, U.S.

Lifestyle Factors	Environmental Factors	Human Biology	Health Care Delivery
1.2%	1.8%	7%	90%

*The public health system is charged to "develop and carry out reasonable health programs that may be necessary for the protection and promotion of the public health and control of diseases". G.S. 143B-142

The provision of public health services is a function of county government.

There is an increased demand on local health departments to play both a coordinating role and a direct service role in health promotion.

Yet, only 30 of 100 counties have funding from the state to carry out health promotion programs; and the state funding provides local health departments with only a portion of funding needed for one full time staff person and project development.

Health Promotion is a Solution Whose Time Has Come

I. The Problem

Today's major health problems are very different from those that affected the people of this state when the public health system was young. The leading causes of death in 1900 were acute, infectious diseases such as influenza, pneumonia, tuberculosis and diarrhea. The response to these health problems was largely effective. Thanks to solutions such as the sanitation of our water supplies, immunizations and certain advances in medical technology, the impact of these health problems on our citizenry has been slowed or halted.

The health problems we face today are of a different nature: they are more likely to be chronic than acute and the causative factors are multiple and complex. Cardiovascular disease, cancer, and accidents are the three leading causes of death in North Carolina and nationally. (See Appendices A and B).

The state's age adjusted* mortality rates for heart disease, cerebrovascular disease and accidents are substantially above those for the nation, and the cancer mortality rate is increasing faster than that for the nation. (Consolidated Health Plan for Health Services, N.C. Division of Health Services)

One-third of North Carolina deaths occur to people between the ages of 18 and 64, a rate of 43 premature adult deaths per day.

These deaths rob North Carolina of valuable human and financial resources because they occur during the most productive years of life and because they cause hardships on families, friends and communities.

In North Carolina cardiovascular disease, cancer and accidents accounted for 284,545 total years of life lost in 1984. This is using race-sex life expectancies as follows:

White males - 70
Non-white males - 64
White females - 79
Non-white females - 73

Notice that some of the normative life expectancies are not desirable; a non-white male is currently not even expected to survive his fully productive years much less enjoy such retirement pleasures as spending time with his grandchildren.

The estimated economic impact of the 194,555 person-years of life lost prematurely to the adult working population in 1981 has been estimated at two billion, one hundred million dollars. This only includes loss of potential income, state, federal and general sales taxes. It does not include the cost of medical care, social support through retirement or social services agencies or any survivors, nor does it account for replacing the person who is lost.

*Age-adjusted - a statistical procedure designed to "remove the effect" of age differences for comparison purposes.

The Centers for Disease Control polled experts to determine the relative contributions to the leading causes of death that are made by the following factors:

Lifestyle Factors	Environmental Factors	Human Biology	Health Care Delivery
51%	19%	20%	10%

Aside from human biology, the factors can be modified. In particular many of the lifestyle factors and some of the environmental factors are modifiable and even preventable.

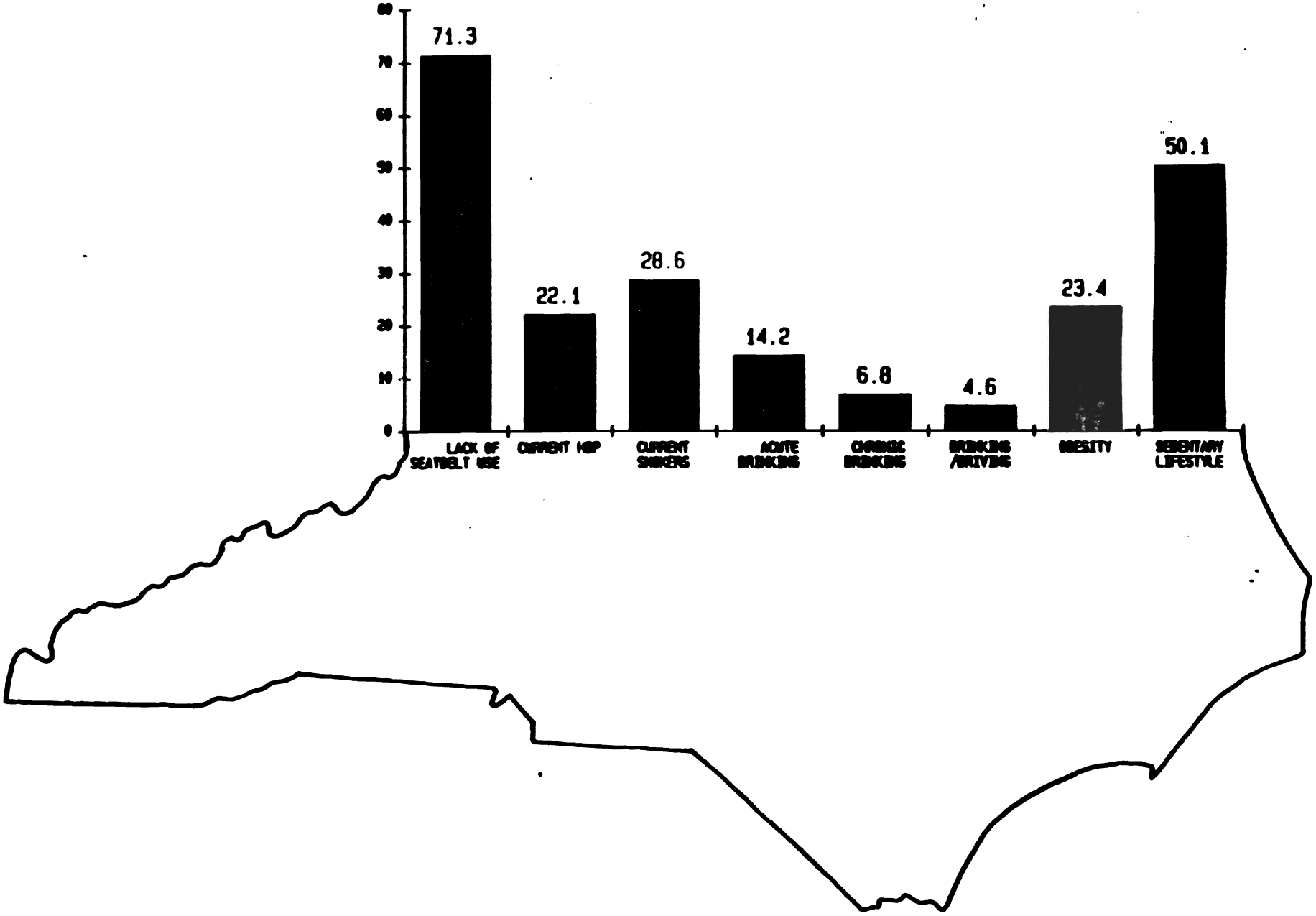
Since February 1984, the Adult Health Services Section, Division of Health Services has coordinated the Behavioral Risk Factor Surveillance System (BRFSS). This system is an ongoing telephone interviewing system that summarizes self-reported lifestyle behaviors in adult North Carolinians. Information is collected on seat belt use, hypertension, exercise, diet, cigarette smoking, and alcohol consumption. North Carolina is one of only twenty-six states now pioneering the BRFSS through cooperative agreement with the Centers for Disease Control (Department of Health and Human Services), and was one of the first states to upgrade the BRFSS to a computer assisted telephone interviewing system. The BRFSS addressed the existing need to build the State's capacity to develop a standardized, active data system targeting in adults the lifestyle behaviors associated with premature mortality. Such information assists the state in targeting scarce resources toward priority health problems.

The 1984 BRFSS data highlight some very important areas in which North Carolinians are shown to be at risk (see tables). This data is based on approximately 1200 surveys and is weighted by age, race, and sex. Note that in 1984, before the North Carolina seat belt law was passed, 71.3% of North Carolinians were at risk because they did not wear seat belts. Also 50.1% were at risk because of sedentary lifestyles, and 23.4% were at risk because they were obese, (20% or more above ideal body weight). The data showed 22.1% of the population at risk for high blood pressure and 28.6% at risk as current smokers.

If the data from the BRFSS are broken down by age, race, and sex, specific sub-groups of the population at highest risk for a given risk factor can be identified. Non-white females and white males in North Carolina are at highest risk because of lack of seat belt use. Non-white females are at highest risk from obesity. While 23.4% of the total population is characterized as obese, 40% of the non-white female population is reported to be obese. Among the adult population, non-white males are at highest risk from cigarette smoking with white males at next hightes risk. With regard to alcohol consumption notable differences appear in risk for males and females. White males and non-white males are at highest risk due to high rates of chronic drinking (60 or more drinks per month), acute drinking (5 or more drinks on one occasion), and drinking and driving. This type of information is vital for the health agencies which need to target scare resources to populations at risk.

TABLE 1

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM 1984



N.C. Behavioral Risk Factor Surveillance System
Graphs Prepared by the State Center for Health Statistics

TABLE 2

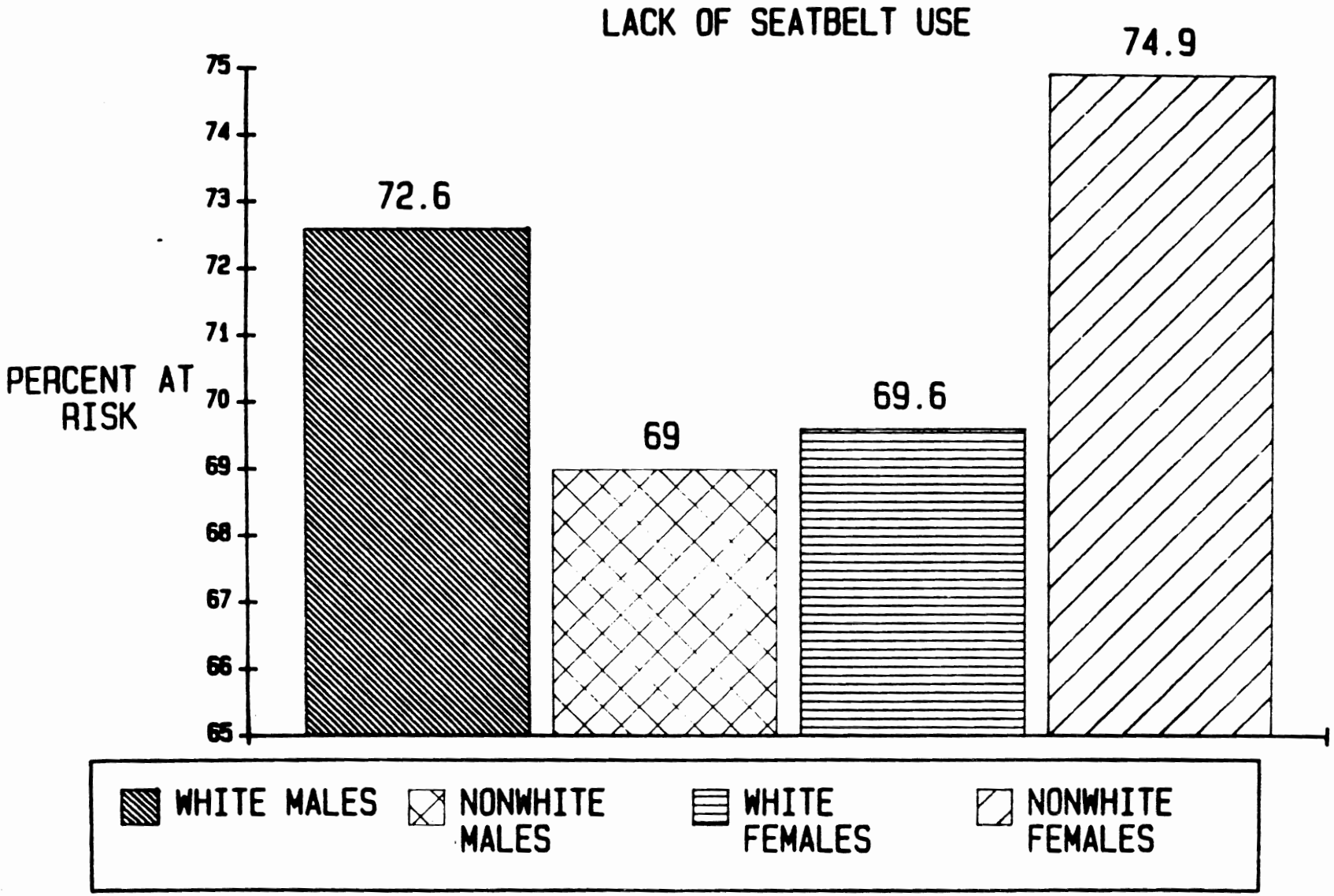

LACK OF SEATBELT USE
PERCENT AT RISK
75
74
73
72
71
70
69
68
67
66
65
72.6
69
69.6
74.9
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 3

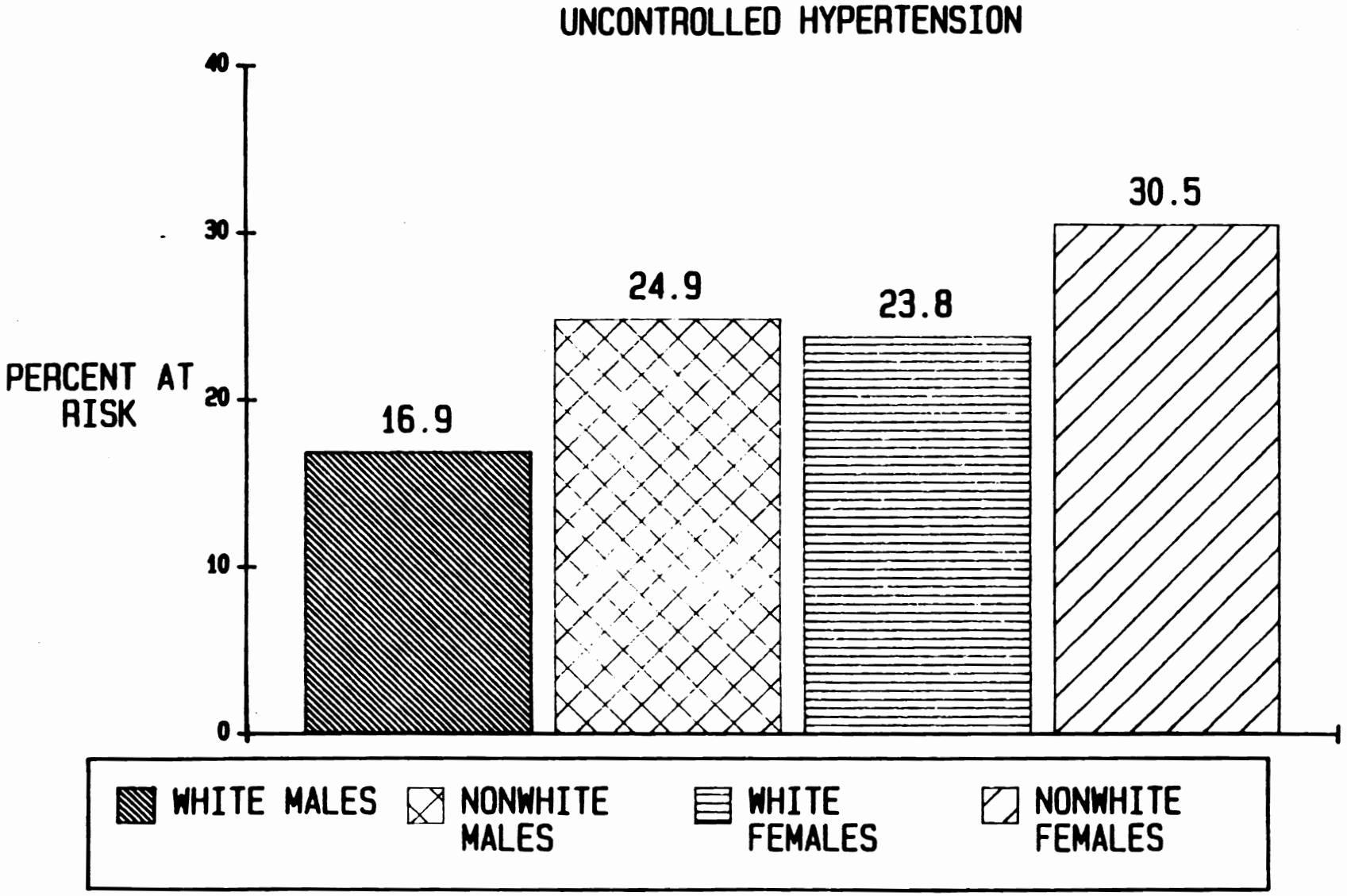

UNCONTROLLED HYPERTENSION
PERCENT AT RISK
40
30
20
10
0
16.9
24.9
23.8
30.5
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 4

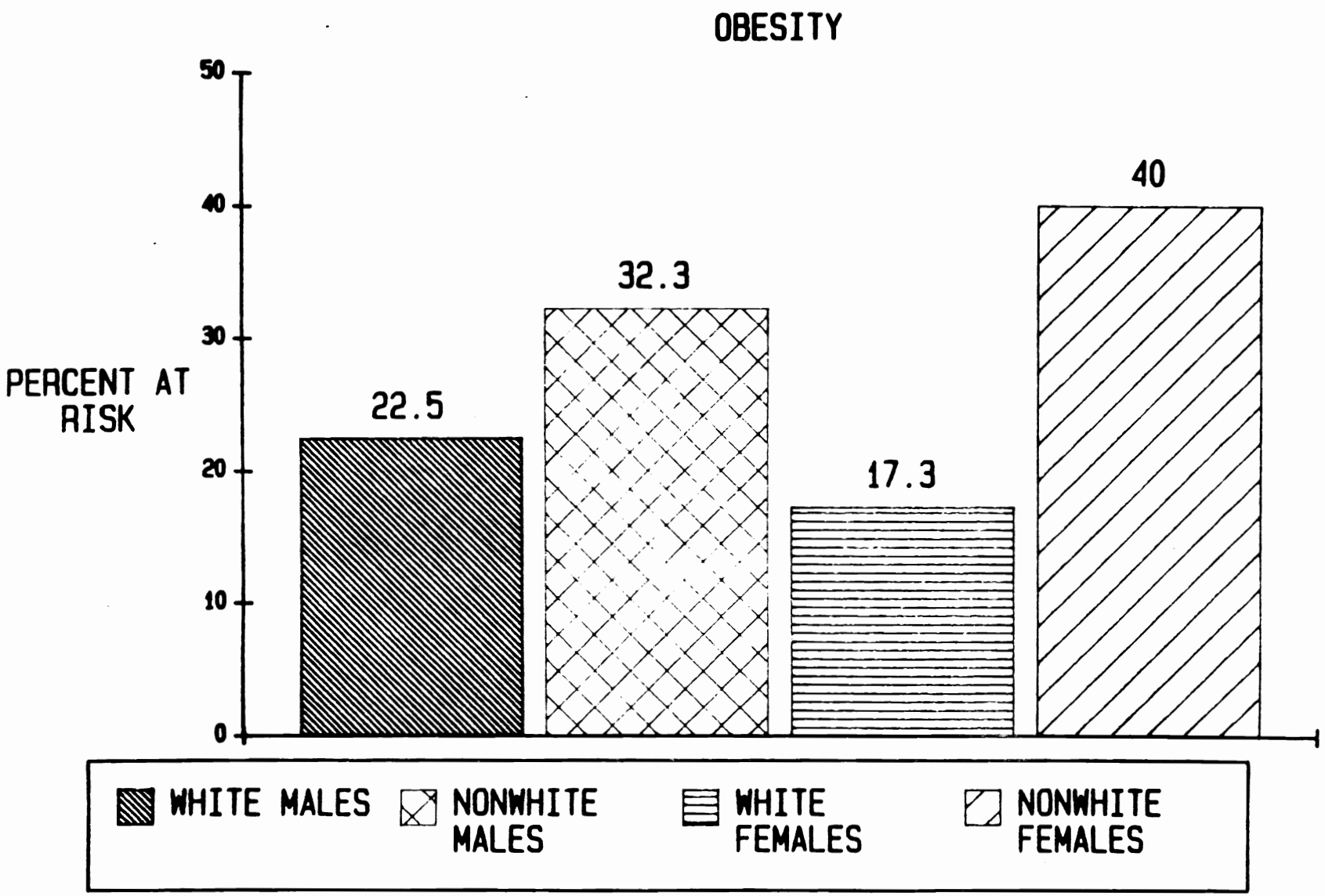

OBESITY
PERCENT AT RISK
50
40
30
20
10
0
22.5
32.3
17.3
40
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 5

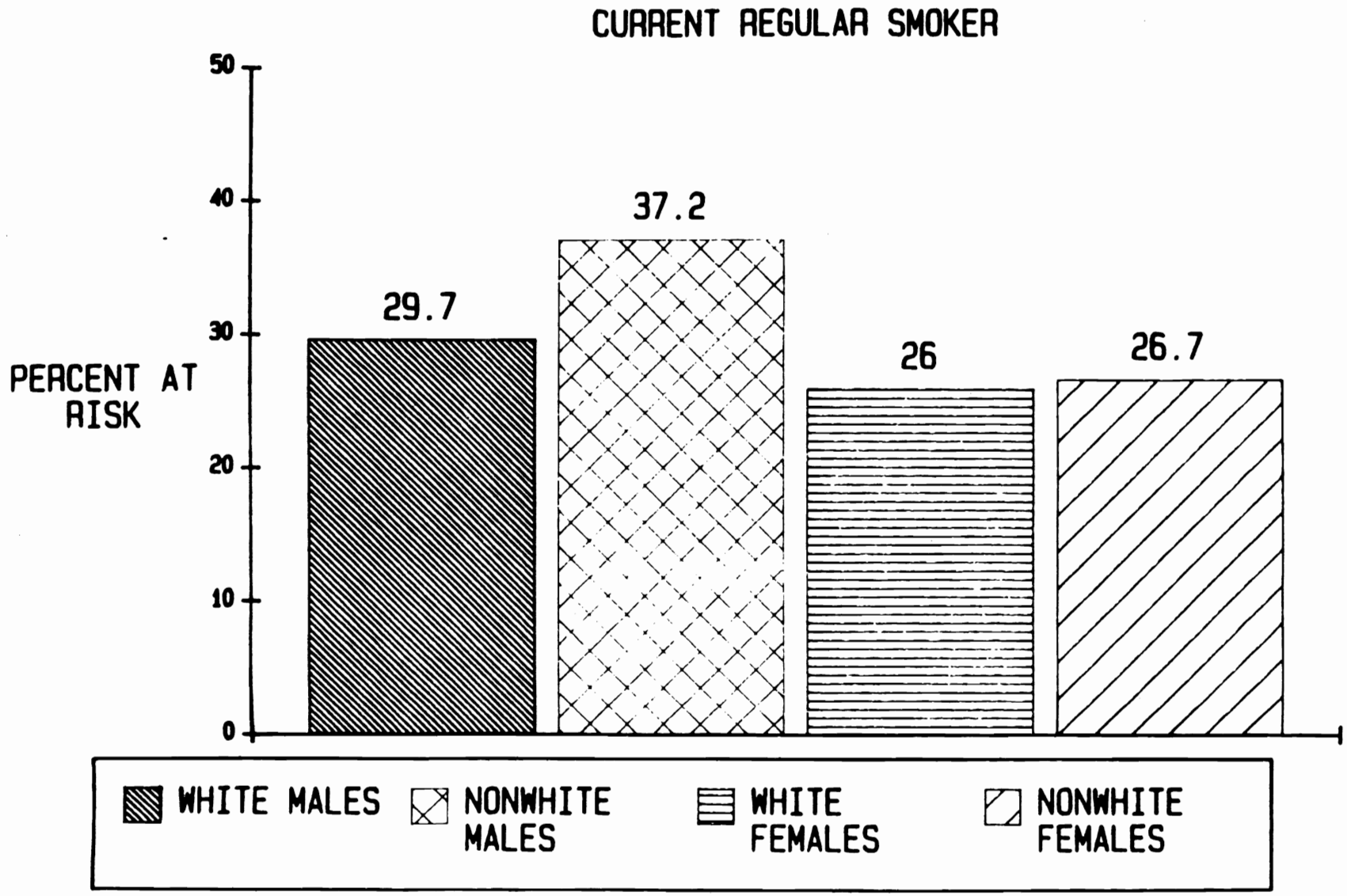

CURRENT REGULAR SMOKER
PERCENT AT RISK
50
40
30
20
10
0
29.7
37.2
26
26.7
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 6

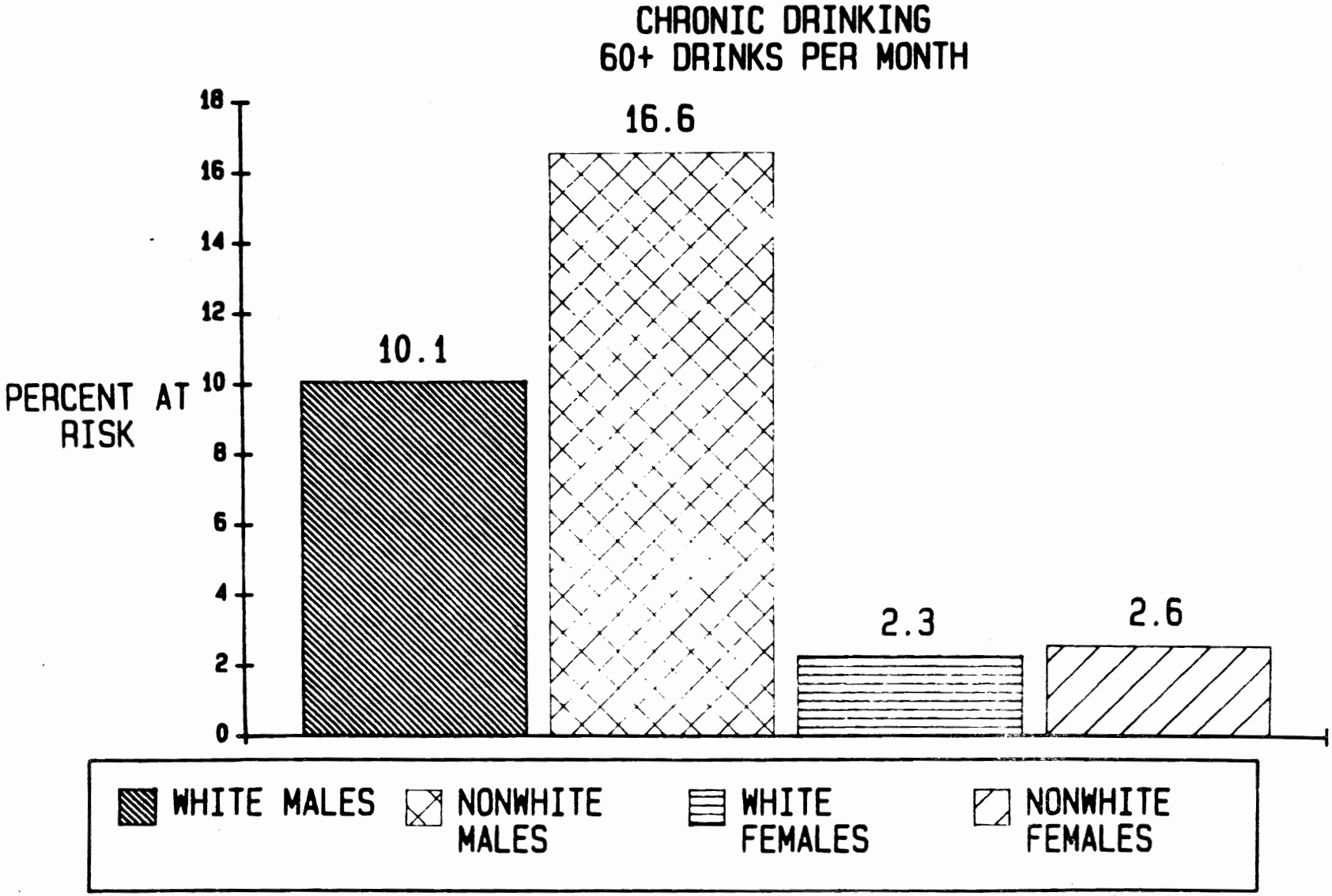

CHRONIC DRINKING
60+ DRINKS PER MONTH
PERCENT AT RISK
18
16
14
12
10
8
6
4
2
0
10.1
16.6
2.3
2.6
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 7

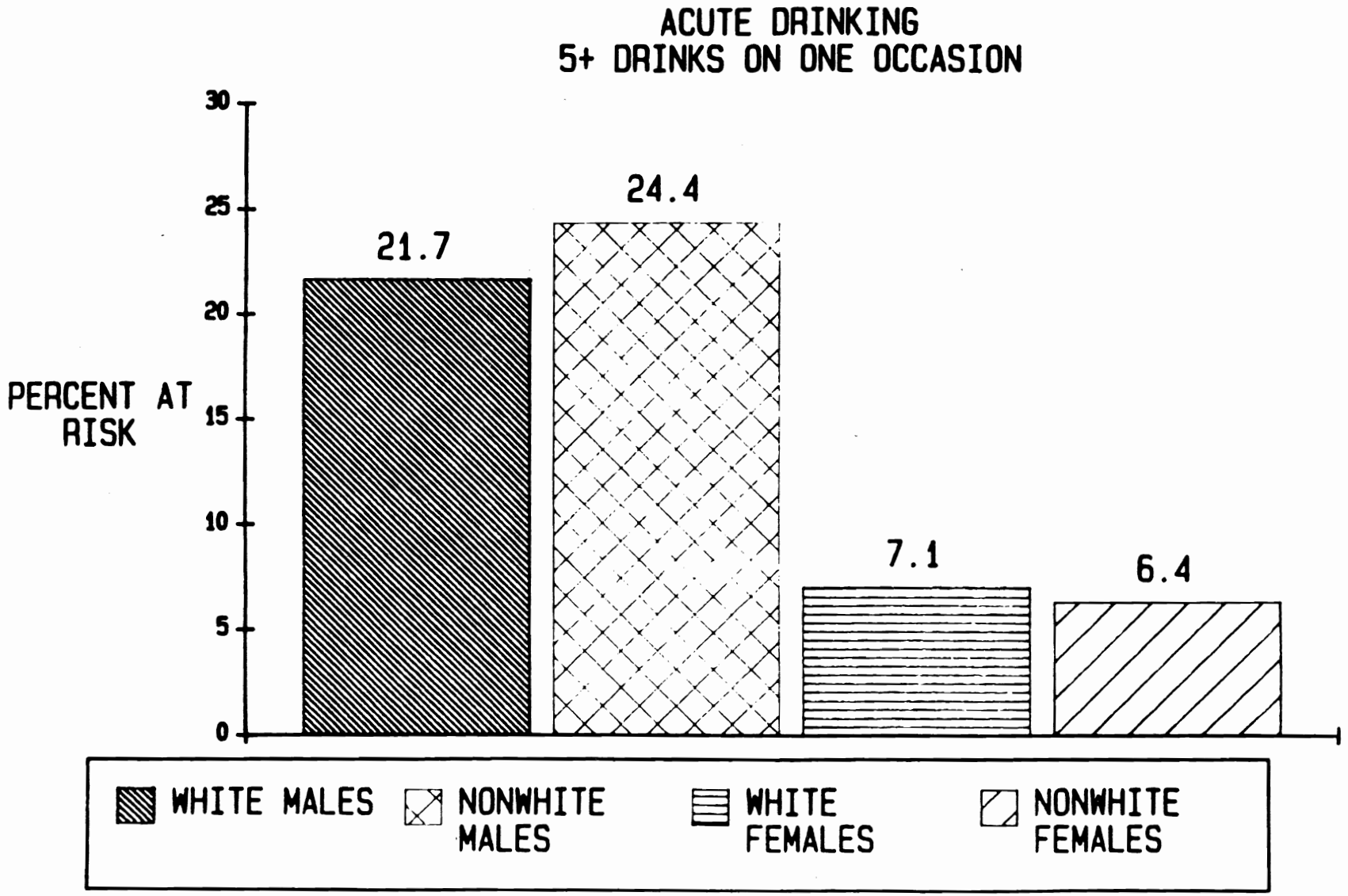

ACUTE DRINKING
5+ DRINKS ON ONE OCCASION
PERCENT AT RISK
30
25
20
15
10
5
0
21.7
24.4
7.1
6.4
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 8

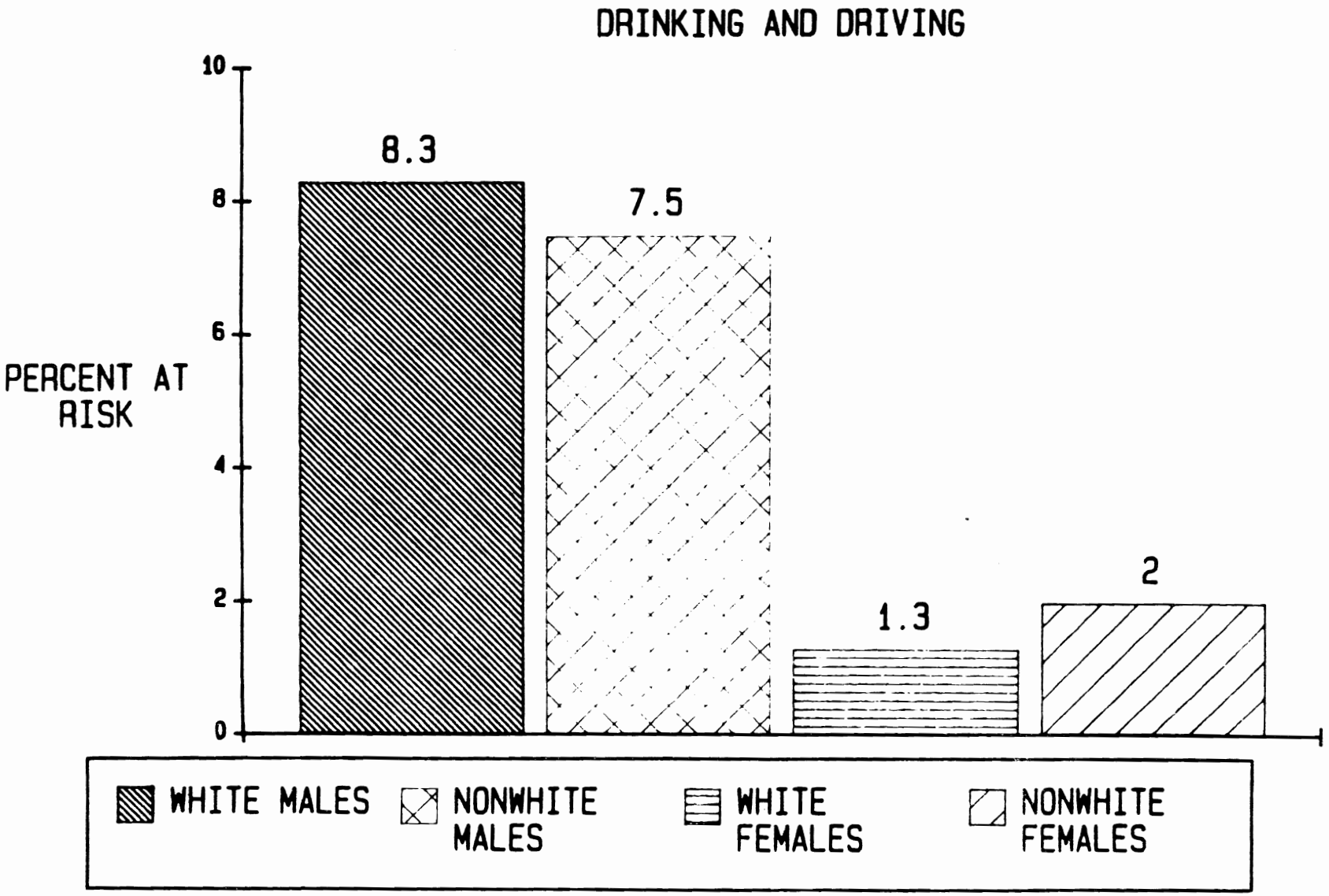
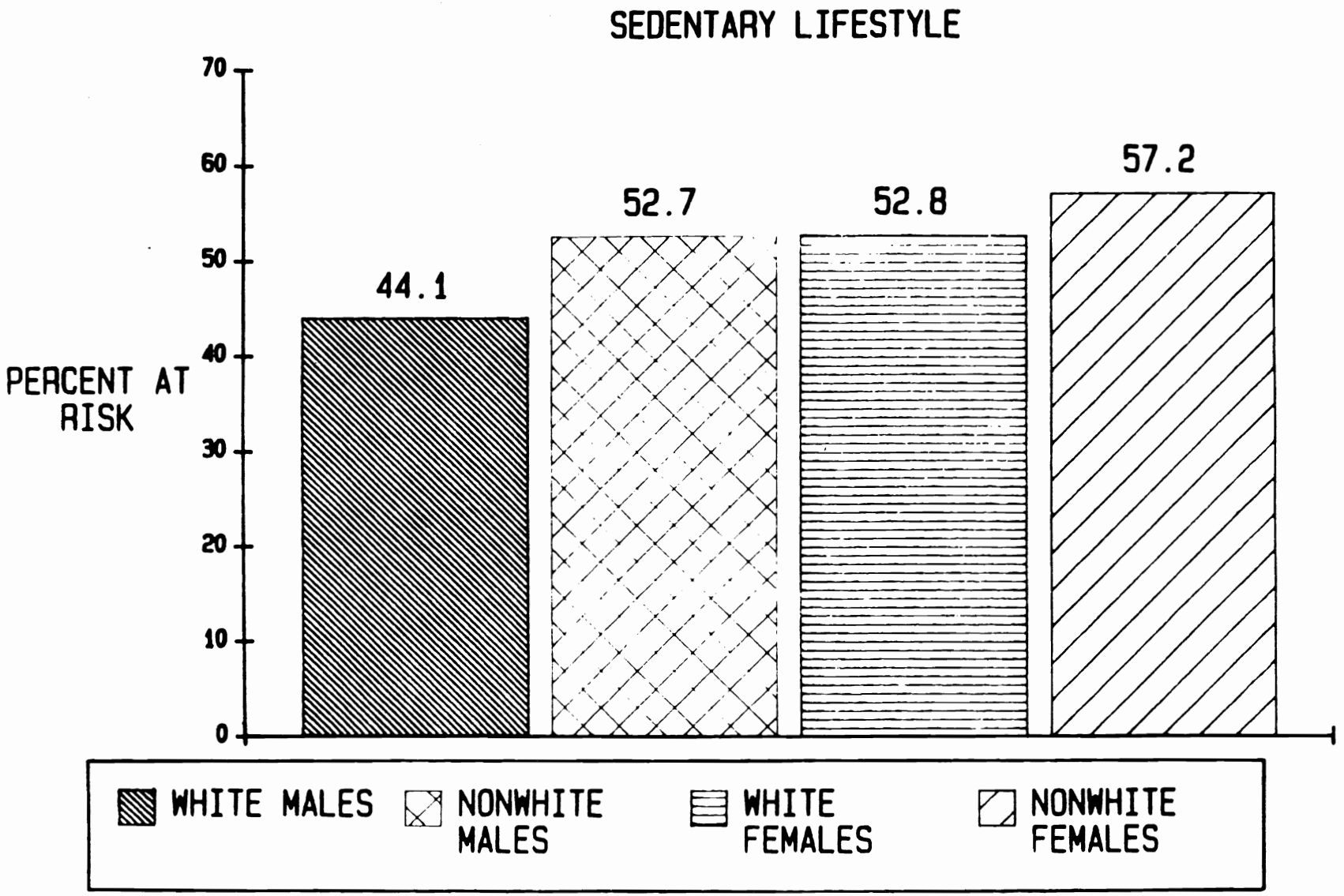

DRINKING AND DRIVING
PERCENT AT RISK
10
8
6
4
2
0
8.3
7.5
1.3
2
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

TABLE 9


SEDENTARY LIFESTYLE
PERCENT AT RISK
70
60
50
40
30
20
10
0
44.1
52.7
52.8
57.2
WHITE MALES
NONWHITE MALES
WHITE FEMALES
NONWHITE FEMALES

If we consider the impact that these lifestyle risk factors have on premature deaths in North Carolina, the results are revealing. Using an attributable risk formula developed from national data for the Centers for Disease Control, we have estimated that smoking accounted for 2,162 cancer deaths and 1,332 deaths from heart attack in 1984. A total of approximately 4,744 deaths in 1984 were attributable to smoking. Drinking is estimated to account for 1,029 accidental deaths the same year, and use of seat belts by fatal accident victims could have reduced deaths in 1984 by 615.

Overweight by 20% or more is estimated to account for 4,387 deaths from cancer and 1,528 deaths from heart attacks. Lack of exercise is estimated to account for 1,055 of 1984 deaths due to heart attacks.

For more information regarding mortality in the United States and North Carolina, see Appendix A.

II. The Technology is Rapidly Growing to Address Many of these Preventable Risk Factors.

"Health promotion" is a term used to denote a wide variety of individual and community efforts to encourage behaviors and modify environments conducive to health. "Disease Prevention" as defined in the 1979 landmark publication, Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention begins with a threat to health - a disease or environmental hazard - and seeks to protect as many people as possible from the harmful consequences of that threat. "Medical care" is the third phase of the continuum; it seeks to keep the sick alive, make them well, or minimize their disability. For the purposes of this report, we are primarily concerned with health promotion, as it is the phase of the public health system which is most in need of resources and development.

Health promotion may involve any combination of educational, organizational, economic and environmental interventions, usually targeted toward one or more of the lifestyle behaviors considered harmful to health, e.g. inadequate/inappropriate diet, lack of physical activity (sedentary patterns), smoking, high stress levels or inadequate coping mechanisms, alcohol and drug misuse or behaviors contributing to unintentional injuries (adapted from Green and Johnson).

The Framingham Heart Study which began in 1948 is one of the most important research efforts in documenting the effectiveness of health promotion because it correlates behavior-related risk factors with cardiovascular disease: (Iverson)

- o People with high blood pressure have twice the risk of developing coronary heart disease as people with normal blood pressure
- o Weight gain is associated with an elevation in blood pressure
- o The rate of coronary heart disease for men with sedentary lifestyles is about three times higher than that for active men
- o Obesity is a significant independent predictor of coronary heart disease
- o Cigarette smoking is the strongest observed risk factor for sudden cardiac death

The National, Heart, Lung and Blood Institute has not only labeled high blood cholesterol as a risk for heart disease, they have shown that modifications in this risk factor can actually reduce risk of mortality.

In the general field of health promotion, there is a wide variety of intervention technologies, some of which have been successfully evaluated. To accomplish a particular health promotion goal there is typically no "one best way" which can be adopted across all sites and settings. Effective interventions are planned to meet the specific needs and demands of a defined target population or community. Multiple intervention approaches have been shown to be effective in modifying risk factors in patient (Green) and community (National High Blood Pressure Education Program) settings. Health promotion programs are best considered as one component of a larger, more comprehensive range of health programs and services (APHA, DeFries et. al).

Several major studies have provided supportive evidence that demonstrate the effectiveness of planned health promotion programs in bringing about positive, health related change. (See Appendix E). These include:

The Alameda County Study found five health practices to independently contribute to health status or mortality: not having ever smoked cigarettes, regularly engaging in physical activity, using alcohol moderately or not at all, regularly sleeping seven to eight hours and maintaining proper weight.

The Hypertension Detection and Follow Up Program found a 17 percent lower five year mortality rate attributable to all causes for those in a systematic or "stepped care" approach to the treatment of hypertension. Carefully controlled drug therapies plus education and counselling regarding specific risk factors such as heavy smoking and excess overweight were included in the interventions.

The Multiple Risk Factor Intervention Trial (MRFIT) showed statistically significant results for the study group in several risk factors for men who were at risk for coronary artery disease. While differences in mortality were not statistically significant, both the study group (which received intervention porgrams for the risk factors) and the Usual Care group (who were referred to their physicians) were able to change their behaviors, with those in the study group making statistically greater changes than those in the control group. According to Iverson, "the fact that both groups had mortality rates lower than expected offers evidence that health promotion interventions along with societal trends may result in greater positive changes than either could achieve without the other."

The Stanford Three Community Study showed greatest reductions in cardiovascular disease risk factors in a community that had mass media combined with personal communications interventions; the next greatest reductions in a community that received a mass media intervention only; the least changes were in the control group.

The North Karelia Project (Finland) was begun in response to a broadly supported local demand that something be done about the high rates of cardiovascular disease. Reductions in blood pressure and animal fat consumption were shown, as well as small, statistically significant reductions in cholesterol. The North Karelia Project succeeded in taking a "community" approach to a public health problem rather than segminting a high risk group (Wagner).

North Carolina has demonstrated effective health promotion efforts. The North Carolina State Baptist Convention's Health and Human Services Project was a winner of a national Community Health Promotion Award sponsored by the Department of Health and Human Services. This project strengthens the role the church provides in social support by identifying and training lay health advisors to increase awareness and skills of church members to maintain and improve their health.

The "Seat Belts Pay Off Program," also a winner of the DHHS Award in 1981 demonstrated a significant increase in seat belt use through an educational campaign combined with an incentives approach.

A Division of Health Services' funded Risk Reduction Program in Johnston County recently won the first Governor's Award, "Best Fitness and Health Program for Mature Adults." This Johnston County Health Department project is a cooperative community model that addresses the needs of older adults at senior centers and churches through a variety of interventions such as swimming, walking, aerobics and health education classes.

These are exciting times in public health promotion. We have better baseline data, a more sophisticated planning mechanism and a strengthened theory and methodology base (Kreuter). Yet of the four contributing factors to today's causes of death, lifestyle programs receive the smallest percentage of funding.

Determinants of Health

Lifestyle Factors	Environmental Factors	Human Biology	Health Care Delivery
51%	19%	20%	10%

Corresponding Investments in Health

Lifestyle Factors	Environmental Factors	Human Biology	Health Care Delivery
1.2%	1.8%	7%	90%

Additional revenues are needed to meet this demand for effectively planned health promotion strategies statewide in this new but fundamentally important dimension of public health.

III. The System Exists from Which to Coordinate Statewide Health Promotion Programs

The Secretary, Department of Human Resources, is authorized to "develop and carry out reasonable health programs that may be necessary for the protection and promotion of the public health and control of diseases." G.S. 130A-5(3). The Secretary has delegated authority in the area of public health to the State Health Director.

The Commission for Health Services is the policymaking and rulemaking authority for public health services in North Carolina. The Commission has the authority and duty to adopt rules to protect and promote the public health and to implement public health programs administered by the Division of Health Services. (G.S. 143B-142)

The provision of public health services is a function of county government. GS 130A-34. Under North Carolina law, the local board of health provides policymaking, regulation and rulemaking, and adjudicatory functions for the local health department. GS. 130A-35(a). Board of health powers and duties include the responsibility to protect and promote the public health and adopt rules for such purposes GS. 130A-39(a).

Additionally, the board of health has the responsibility to appoint the local health director, prescribe public health duties to be performed by the health director, and to supervise the performance of such duties. (GS 130A-40); G.S. 130A-41)

Beyond the responsibilities for public health described by statute, the field characterizes itself by:

- o a tendency to preserve equity
- o a focus on populations and communities
- o an active, participatory preventive orientation
- o a recognition of the need for multiple/comprehensive approaches.

The changes in the leading causes of death and the need to respond to these preventable/modifiable risk factors is causing the Public Health Service to change its agenda. This transition is being documented by the landmark publication Healthy People and its successor Promoting Health, Preventing Disease Objectives for the Nation.

The Division of Health Services began to administer health promotion/disease prevention projects through the federally supported Risk Reduction Program in 1980. As the Risk Reduction funding evolved from categorical funding (Centers for Disease Control) to a portion of the Preventive Health Services Block Grant, a system was developed for local health departments to apply for Risk Reduction Project Grants. (See Appendix E) A total of thirty grants (ranging from $7,000 to $20,000 each) has been awarded from the Risk Reduction Program. These grants alone provide local health departments with a percentage of the funds needed for a professional staff person and a small amount for project development. Central and regional offices offer supportive services such as consultation and training to local health departments administering these projects.

Local health departments are getting increased demands: 1) to serve as a coordinating role for health promotion/disease prevention efforts in their counties; and 2) in a role of provision of health promotion services. With adequate resources, local health departments could coordinate community-wide efforts in developing public and private partnerships with business and industry, with other health care providers, with voluntary and other agencies such as the American Cancer Society, North Carolina Division; American Lung Association of North Carolina; American Red Cross; and American Heart Association, North Carolina; Agricultural Extension; and Adult and Community Education. Local health departments could also use additional resources to provide health promotion services to high risk groups, the unemployed, the retired, and smaller businesses lacking internal resources. Cooperation and local planning are essential ingredients to developing multiple interventions that will produce results.

IV. Estimates of Resources Needed to Adequately Address These Preventable Health Problems

Several million dollars would be needed to develop effective statewide health promotion efforts. Program priorities should be determined with involvement at the local level within flexible guidelines offered from the state level. Specific dollar amounts cannot be derived until a better definition of a comprehensive health promotion strategy is determined and how this strategy is to be meshed with existing efforts.

V. Closing Statement

The questions are:

- Can we be responsive to the strong ethic for prevention that is developing nationally and in North Carolina?
- When these problems are largely preventable, can we agree that we will not tolerate unnecessary illness and suffering?

Health departments across the state need support to meet the demand to develop effective health promotion/disease prevention programs for and with the citizens of the 100 counties.

References

1. Division of Health Services Consolidated Plan for Health Services FY 86; Progress Report on FY 85.

2. Green, L.W., et al. Clinical trials of health education for hypertensive outpatients: design and baseline data. Prev Med 1975;4417-425.

3. National High Blood Pressure Education Program. Patient tracking in hypertension control-summary of interim results of study. October, 1978.

4. American Public Health Association, DeFries, Gordon: Chair, Ad Hoc Work Group, "Criteria for the Development of Health Promotion and Education Programs" Washington, D.C., 1985.

5. Iverson, Donald C. "Making the Case for Health Promotion," Promoting Health May - June, 1984.

6. National Heart, Lung and Blood Institute The Lipid Research Clinics Coronary Primary Prevention Trial Results. Journal of the American Medical Association. Jan 20, 1984 - Vol 251, No. 3.

7. Wagner, Edward H. "The North Karelia Project: What It Tells Us About the Prevention of Cardiovascular Disease" American Journal of Public Health January 1982, Vol 72, No. 1.

8. Kreuter, Marshall, Correspondence in response to the question: "Does Health Education Work?"

APPENDIX A

NATIONAL DATA AND TRENDS

Contents

Also in DHR report but not included for Legislative Research Commission report:

Salkever, David S., Morbidity Costs: National Estimates and Economic Developments, NCHSR (National Center for Health Services Research), October 1985.

The News and Observer, Raleigh, N.C., December 3, 1985, p. 1A, "Lung-cancer rate drops for white men for 1st time in half-century, report says."

Table 15. Age-adjusted death rates for selected causes of death, according to race and sex: United States, selected years 1950-82

(Data are based on the National Vital Statistics System)

Race, sex, and cause of death	Year							
	1950[1]	1960[1]	1970	1975	1979	1980	1981[2]	1982[2]
Total[3]	Deaths per 100,000 resident population							
All causes	841.5	760.9	714.3	630.4	577.0	585.8	571.6	556.4
Diseases of heart	307.6	286.2	253.6	217.8	199.5	202.0	196.3	190.8
Cerebrovascular diseases	88.8	79.7	66.3	53.7	41.6	40.8	38.3	36.1
Malignant neoplasms	125.4	125.8	129.9	129.4	130.8	132.8	131.6	133.3
Respiratory system	12.8	19.2	28.4	32.1	35.2	36.4	37.0	37.7
Digestive system	47.7	41.1	35.2	33.2	33.1	33.0	32.2	32.1
Breast[4]	22.2	22.3	23.1	22.6	22.3	22.7	---	---
Pneumonia and influenza	26.2	28.0	22.1	16.4	11.2	12.9	12.8	11.3
Chronic liver disease and cirrhosis	8.5	10.5	14.7	13.7	12.0	12.2	11.5	10.4
Diabetes mellitus	14.3	13.6	14.1	11.4	9.8	10.1	9.9	9.2
Accidents and adverse effects	57.5	49.9	53.7	44.2	42.9	42.3	40.2	37.1
Motor vehicle accidents	23.3	22.5	27.4	21.0	23.2	22.9	21.9	19.5
Suicide	11.0	10.6	11.8	12.5	11.7	11.4	11.3	11.5
Homicide and legal intervention	5.4	5.2	9.1	10.4	10.2	10.8	10.3	9.7
White male								
All causes	963.1	917.7	893.4	804.3	738.4	745.3	730.8	709.7
Diseases of heart	381.1	375.4	347.6	305.1	276.8	277.5	---	---
Cerebrovascular diseases	87.0	80.3	68.8	56.7	42.9	41.9	---	---
Malignant neoplasms	130.9	141.6	154.3	155.8	158.7	160.5	---	---
Respiratory system	21.6	34.6	49.9	54.1	57.0	58.0	---	---
Digestive system	54.0	47.5	41.9	39.8	40.0	39.8	---	---
Pneumonia and influenza	27.1	31.0	26.0	20.8	14.4	16.2	---	---
Chronic liver disease and cirrhosis	11.6	14.4	18.8	17.8	15.6	15.7	---	---
Diabetes mellitus	11.3	11.6	12.7	10.6	9.3	9.5	---	---
Accidents and adverse effects	80.9	70.5	76.2	64.1	63.3	62.3	---	---
Motor vehicle accidents	35.9	34.0	40.1	31.4	35.5	34.8	---	---
Suicide	18.1	17.5	18.2	19.6	18.6	18.9	---	---
Homicide and legal intervention	3.9	3.9	7.3	9.3	9.9	10.9	---	---
White female								
All causes	645.0	555.0	501.7	439.0	402.5	411.1	403.7	395.1
Diseases of heart	223.6	197.1	167.8	141.9	131.3	134.6	---	---
Cerebrovascular diseases	79.7	68.7	56.2	46.1	35.9	35.2	---	---
Malignant neoplasms	119.4	109.5	107.6	105.6	105.7	107.7	---	---
Respiratory system	4.6	5.1	10.1	13.7	17.0	18.2	---	---
Digestive system	41.1	33.9	28.1	26.1	25.5	25.4	---	---
Breast[4]	22.5	22.4	23.4	22.8	22.4	22.8	---	---
Pneumonia and influenza	18.9	19.0	15.0	11.5	7.8	9.4	---	---
Chronic liver disease and cirrhosis	5.8	6.6	8.7	7.9	7.0	7.0	---	---
Diabetes mellitus	16.4	13.7	12.8	10.0	8.3	8.7	---	---
Accidents and adverse effects	30.6	25.5	27.2	22.1	21.6	21.4	---	---
Motor vehicle accidents	10.6	11.1	14.4	10.8	12.3	12.3	---	---
Suicide	5.3	5.3	7.2	7.3	6.3	5.7	---	---
Homicide and legal intervention	1.4	1.5	2.2	2.9	2.9	3.2	---	---

See footnotes at end of table.

Source: Health, United States, 1983

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MORBIDITY AND MORTALITY WEEKLY REPORT

Perspectives in Disease Prevention and Health Promotion

Premature Mortality — United States, 1982

In this issue, Table V has been updated to show premature mortality expressed as Years of Potential Life Lost (YPLL) from the first birthday to age 65 for persons who died in 1982. These new data are based on age- and cause-specific death rates for 1982 from the National Center for Health Statistics (NCHS) (*1*).

From 1981 to 1982, the total YPLL for persons who died between ages 1 and 65 years decreased by 4.6% (Table 1), in contrast to a decline of 1.3% between 1980 and 1981 (*2*). The relative rankings of the nine causes of death included in previous versions of Table V did not change between 1981 and 1982. Accidents remained the leading cause of premature loss of life, although they underwent the largest percentage decrease in YPLL (8.5%) of any cause between the 2 years. Substantial reductions in YPLL also occurred for cerebrovascular disease (7.0%), suicide and homicide (6.4%), and chronic liver disease and cirrhosis (5.8%). Only diabetes mellitus exhibited an increase in YPLL, and this increase was small (0.3%). Since the YPLL for both 1981 and 1982 are based on preliminary NCHS mortality data, the absolute YPLL and relative differences may change slightly when final mortality statistics become available.

Reported by Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, CDC.

References

1 National Center for Vital Statistics. Monthly Vital Statistics Report (MVSR), 31 21-2 (October 5, 1983).
2. CDC. Premature death — United States. MMWR 1983;32:118-9.

TABLE 1. Comparison of years of potential life lost (YPLL) (ages 1-65), by selected underlying causes of death — United States, 1981, 1982

Cause (Ninth Revision ICD, 1975)	Percent difference in YPLL from 1981 to 1982*
Accidents and adverse effects (E800-E949)	8.5
Malignant neoplasms (140-208)	0.7
Diseases of heart (390-398, 402, 404-429)	3.4
Suicides, homicides (E950-E978)	6.4
Cerebrovascular diseases (430-438)	7.0
Chronic liver disease and cirrhosis (571)	5.8
Pneumonia and influenza (480-487)	4.3
Chronic obstructive pulmonary diseases and allied conditions (490-496)	2.0
Diabetes mellitus (250)	-0.3
All causes (total)	4.6

*Percent difference = $\frac{(1981\ YPLL - 1982\ YPLL)}{1981\ YPLL} \times 100$

Injuries – Continued

TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1980[1]	Estimated mortality December 1981		Estimated number of physician contacts December 1981[4]
		Number[2]	Annual Rate/100,000[3]	
ALL CAUSES (TOTAL)	10,006,060	168,820	863.1	84,586,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,684,850	8,230	42.1	4,610,000
Malignant neoplasms (140-208)	1,804,120	34,270	175.2	1,403,000
Diseases of heart (390-398, 402, 404-429)	1,636,510	65,960	337.2	4,956,000
Suicides, homicides (E950-E978)	1,401,880	4,110	21.0	–
Chronic liver disease and cirrhosis (571)	301,070	2,250	11.5	86,000
Cerebrovascular diseases (430-438)	280,430	14,530	74.3	557,000
Pneumonia and influenza (480-487)	124,830	4,170	21.3	1,067,000
Diabetes mellitus (250)	117,340	3,090	15.8	2,312,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	110,530	4,930	25.2	2,025,000
Prenatal care[5]				1,911,000
Infant mortality[5]		3,600	11.6 /1000 live births	

[1] Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSR), Vol. 29, No. 13, September 17, 1981, multiplied by the difference between 65 years and the age at the midpoint of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

[2] The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSR Vol. 31, No. 1, April 16, 1982, pp. 8-9) and the provisional U.S. population in that month (MVSR Vol. 30, No. 12, March 18, 1982, p.1) and dividing by the days in the month as a proportion of the days in the year.

[3] Annual mortality rates are estimated by NCHS (MVSR Vol. 31, No. 1, April 16, 1982, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

[4] IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, December, 1981, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

[5] "Prenatal care" (NDTI) and "Infant mortality" (MVSR Vol. 30, No. 12, March 18, 1982, p 1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

Health•United States 1983

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Prevention Profile

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Changes in Heart Disease Risk Factors

by Michael Rowland, Robinson Fulwood, and Joel C. Kleinman, Ph.D., National Center for Health Statistics

Introduction

Heart disease is the leading cause of death in the United States, accounting for more than one-third of all deaths (National Center for Health Statistics, 1982a). The economic cost of heart disease was estimated to be at least $40 billion annually in the United States in 1977 (Rice, 1981). It accounts for more than 11 million physician visits each year (National Center for Health Statistics, 1982b) and is ranked first among disease conditions in utilization of short-stay hospitals (National Center for Health Statistics, 1982c).

Since the mid-1960's, mortality from heart disease has declined rapidly. Many factors have been cited as possibly contributing to this decline, including improved medical services, greater availability of coronary care units, advanced surgical and medical treatment of coronary heart disease, improved control of blood pressure, decreased smoking, modified eating habits, and increased exercise (Gillum, Blackburn, Feinleib, 1982; Kannel, 1982).

Elevated blood pressure, cigarette smoking, and elevated cholesterol level have been identified as major controllable risk factors for coronary heart disease in several epidemiologic studies (McGee and Gordon, 1976; Pooling Project Research Group, 1978). This article examines changes for adults 35–74 years of age in the national prevalence of these three modifiable risk factors. It also assesses the extent to which these changes might account for the reduction in coronary heart disease mortality.

Methods

The data are from the National Health and Nutrition Examination Survey Cycles I and II (NHANES I and NHANES II). NHANES I, conducted from 1971 through 1975, included a subsample of 5,350 persons 35–74 years of age who received a detailed medical examination; and NHANES II, conducted from 1976 through 1980, included 8,213 persons 35–74 years of age.

This article focuses on the proportion of the adult population 35–74 years of age with one or more of these three risk factors for coronary heart disease (CHD). Elevated blood pressure is defined as systolic blood pressure of at least 160 mmHg or diastolic blood pressure of at least 95 mmHg or both. Persons with serum cholesterol of at least 260 mg/dl are classified as having elevated cholesterol level. (Although recent studies have shown that separating cholesterol level into its high- and low-density components will result in more appropriate indicators of CHD risk, these individual measures are available from NHANES II but not NHANES I.)

Although the prevalence of risk factors in the population provides useful information, the complete distribution of actual values of the risk factors and changes in these values are important considerations. In particular, epidemiologic studies have found that the risk of dying from CHD is not only greater for those with risk factors but that the risk increases steadily with increasing blood pressure, cholesterol, and number of cigarettes smoked. Furthermore, the joint impact of two or more elevated risk factors on CHD is greater than the sum of their individual effects; that is, the effects are multiplicative rather than additive.

A mathematical form of the risk function that has provided a good fit to the data in several epidemiologic studies is the multiple logistic function (Gordon and Kannel, 1982), the implications of which are best illustrated by an example. Using a modified version of this function (Kleinman et al., 1981), the probabilities of a man 50 years of age dying from CHD during a given year according to selected values of systolic blood pressure (BP), serum cholesterol, and number of cigarettes smoked per day are shown below:

Systolic BP	*Cholesterol*	*Cigarettes per day*	*Probability per 10,000*
130	185	0	16
150	185	0	22
170	185	0	30
130	260	0	26
130	185	20	31
170	260	20	88

Note that the probability of dying increases with increasing blood pressure even when blood pressure is below 160 mmHg. If the risk of each risk factor were additive, the probability of dying for a man who has blood pressure of 170 mmHg, cholesterol of 260 mg/dl, and who smokes 20 cigarettes per day would be $16 + (30 - 16) + (26 - 16) + (31 - 16) = 55$ per 10,000. However, the probability estimated by the multiple logistic function is 88, 60 percent greater than the additive risk.

The multiple logistic function is used in this article to summarize the joint impact on CHD mortality of changes in the three risk factors between NHANES I and NHANES II. For each respondent, a probability of CHD death based on age, sex, systolic blood pressure, serum cholesterol, and number of cigarettes smoked per day was calculated. This probability was computed by applying a logistic equation derived from the

Framingham Heart Study to the values of the risk factors measured in NHANES (Kleinman et al., 1981). The mean value of these probabilities for each age-race-sex group of NHANES respondents provides an estimate of the group's "expected" CHD mortality rate.[1] Change in the expected death rates between NHANES I and NHANES II provides an estimate of the potential impact of risk-factor changes on CHD mortality.

Several important assumptions underlie this approach. One is that the effects of the risk factors on CHD have not changed over time. Second, although different risk-factor effects are used for men and women, it is assumed that the effects of the risk factors on CHD are the same for each age and race group. Although the assumption regarding age has been examined and found to hold approximately (Shurtleff, 1974), available data are not adequate to test whether risk-factor effects differ by race (Gillum, 1982). Finally, it is assumed that the effect on CHD mortality of a modified risk factor is the same as if the risk factor were at the lower level "naturally." For example, it is assumed that a person who is taking antihypertensive drugs and, as a result, has a blood pressure of 140 mmHg has the same risk of CHD death as one who has blood pressure of 140 and has never been treated for hypertension. The latter assumption has recently been called into question (National Institutes of Health, 1982).

Results

Individual risk factors

The prevalence of elevated blood pressure increases with age and is greater among black people than among white people. In general, men in the age group 35–44 years are more likely to have elevated blood pressure than are women of the same age, but such differences are minimal for those 45 years of age and over (National Center for Health Statistics, 1982d).

Between NHANES I and NHANES II, the proportion of persons with elevated blood pressure decreased substantially (table A). The relative decrease was greatest for black men (37 percent). As a result, the race differentials so evident in the 1971–75 survey narrowed substantially by the 1976–80 survey.

The prevalence of elevated cholesterol generally varies according to age and sex but not according to race. Among men, the prevalence is lowest in the age group 35–44 years but prevalence by age varies little for those 45–74 years. Among women, however, the prevalence increases with age. As a result, women under 45 years of age have a lower prevalence of elevated cholesterol than do men while the reverse is true for those 55 years of age and over (National Center for Health Statistics, 1978). However, the change in prevalence of elevated cholesterol between survey periods was not statistically significant for the four race-sex groups (table B).

In general, the proportion of adults who were current cigarette smokers decreased between NHANES I and NHANES II (table C). The decline was greatest for black women (24 percent)[2] and intermediate for white and black men (7 percent and 5 percent, respectively). There was no change in smoking for white women. As a result, the race differential among women disappeared in NHANES II. Black men had the highest prevalence of smoking in both survey periods.

The proportions of heavy smokers (25 cigarettes or more per day) in the population did not change significantly between survey periods. Thus, the decrease in smoking between survey periods resulted from a reduction in the proportion of light and moderate smokers.

Table A. Age-adjusted[1] prevalence rates of elevated blood pressure[2] for persons 35–74 years of age, according to race and sex: United States, 1971–75 and 1976–80

Race and sex	Elevated blood pressure	
	1971–75	1976–80
	Rate per 100 population	
White		
Men	22.2	19.0
Women	19.0	14.5
Black		
Men	43.5	27.6
Women	37.8	32.4

[1]Age adjusted by direct method to the 1976–80 National Health and Nutrition Examination Survey population.
[2]Systolic blood pressure of at least 160 mmHg and/or diastolic blood pressure of at least 95 mmHg.

SOURCE: National Center for Health Statistics: Data from the National Health and Nutrition Examination Survey.

Table B. Age-adjusted[1] prevalence rates of elevated serum cholesterol levels[2] for persons 35–74 years of age, according to race and age: United States, 1971–75 and 1976–80

Race and sex	Elevated serum cholesterol	
	1971–75	1976–80
	Rate per 100 population	
White		
Men	17.7	19.5
Women	25.9	24.9
Black		
Men	28.2	22.6
Women	23.9	24.3

[1]Age adjusted by the direct method to the 1976–80 National Health and Nutrition Examination Survey population.
[2]Serum cholesterol of at least 260 mg/dl.

SOURCE: National Center for Health Statistics: Data from the National Health and Nutrition Examination Survey.

[1]Since these probabilities are rough approximations and occasionally result in unusually large or small values, "trimmed" means (omitting the upper and lower 10 percent of the values) were used to provide more stable estimates of "expected" death rates.

[2]It should be noted that the age-adjusted prevalence rate of smoking among black women estimated from NHANES I (40 percent) is higher than the 35 percent estimate from the 1974 National Health Interview Survey (NHIS). The decrease in smoking prevalence among black women estimated from NHIS is about 10 percent, compared with 24 percent from NHANES. NHIS and NHANES data for the other three groups agree quite well.

Table C. Age-adjusted[1] rates of current smokers[2] and those who smoke 25 cigarettes or more per day for persons 35–74 years of age, according to race and sex: United States, 1971–75 and 1976–80

Race and sex	Current smoker		25 cigarettes or more per day	
	1971–75	1976–80	1971–75	1976–80
	Rate[3] per 100 population			
White				
Men	40.6	37.6	17.1	17.5
Women	31.3	31.3	6.0	8.2
Black				
Men	48.7	46.5	5.6	9.6
Women	39.5	29.9	1.1	3.5

[1]Age adjusted by the direct method to the 1976–80 National Health and Nutrition Examination Survey population.
[2]A current smoker is a person who has smoked at least 100 cigarettes and who now smokes; includes occasional smokers.
[3]Base of percent excludes persons with unknown smoking status.

SOURCE: National Center for Health Statistics: Data from the National Health and Nutrition Examination Survey.

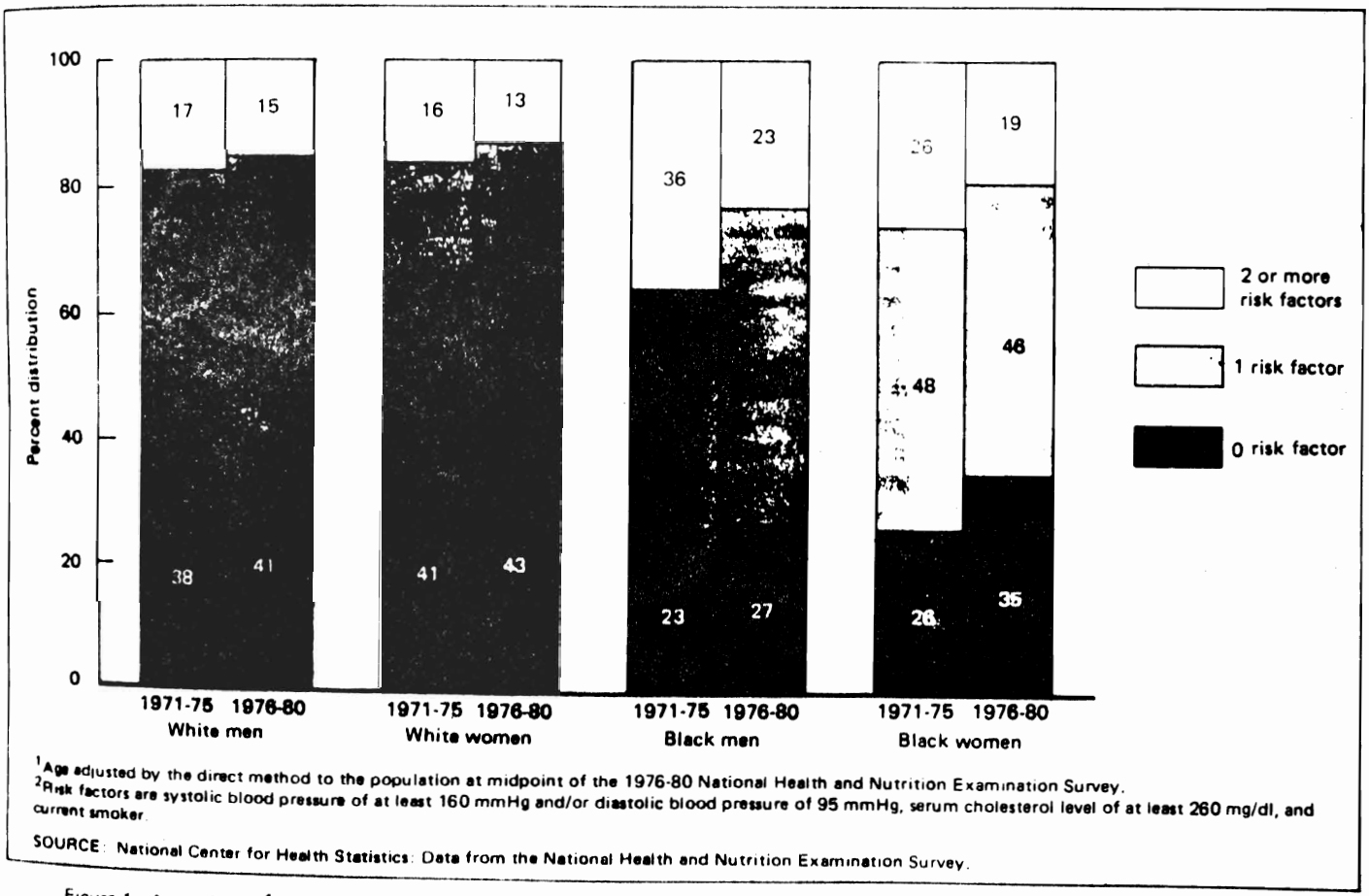
Multiple risk factors

As discussed, people with more than one elevated risk factor are at especially high risk of CHD mortality. The percent of the population with two or more risk factors is higher among black people than among white people, but there is little difference between men and women (figure 1). As previously noted, the proportion of adults with elevated blood pressure and the proportion of adult cigarette smokers decreased between NHANES I and NHANES II. These decreases were greater for black people than for white people and are reflected in a greater decrease in the proportion of black people with two or more risk factors. Despite these marked changes in the risk-factor distribution between surveys, only 27 percent of black men, 35 percent of black women, 41 percent of white men, and 43 percent of white women had no elevated risk factor in the late 1970's.

Impact on coronary heart disease mortality

Previous sections of this article have examined the change in national prevalence of elevated blood pressure, cigarette smoking, and elevated serum cholesterol levels among adults 35–74 years of age. In this section, the impact of these changes on CHD mortality is examined using the approach outlined in the Methods section. Changes in observed CHD mortality reported from vital statistics are compared with expected CHD mortality estimated from NHANES risk-factor data for adults 35–74 years of age.

Expected CHD mortality based on risk-factor data from NHANES declined by 13–16 percent for black people and 7–8 percent for white people (table D). The differences between men and women were not statistically significant. Observed



[1]Age adjusted by the direct method to the population at midpoint of the 1976-80 National Health and Nutrition Examination Survey.
[2]Risk factors are systolic blood pressure of at least 160 mmHg and/or diastolic blood pressure of 95 mmHg, serum cholesterol level of at least 260 mg/dl, and current smoker.

SOURCE: National Center for Health Statistics: Data from the National Health and Nutrition Examination Survey.

Figure 1. Age-adjusted[1] percent distribution of persons 35-74 years of age, according to selected number of coronary heart disease risk factors,[2] race, and sex: United States, 1971-75 and 1976-80.

Table D. Percent decrease in age-adjusted[1] rates for observed[2] and expected[3] coronary heart disease mortality among persons 35–74 years of age, according to race and sex: United States

Race and sex	Coronary heart disease mortality	
	Observed	Expected
	Percent decrease	
White		
Men	17	7
Women	18	8
Black		
Men	16	13
Women	24	16

[1]Age adjusted by direct method to the 1976–80 National Health and Nutrition Examination Survey population.
[2]Percent decrease between 1973 and 1977–78.
[3]Estimated from risk factors measured in the 1971–75 and 1976–80 National Health and Nutrition Examination Surveys.

NOTE: Codes for coronary heart disease are 410–413 based on the *Eighth Revision International Classification of Diseases, Adapted for Use in the United States.*

SOURCES: National Center for Health Statistics: Data from the National Health and Nutrition Examination Survey and the National Vital Statistics System.

CHD mortality declined 24 percent among black women and 16–18 percent for each of the other three groups. Dividing the percent change in expected rates by the percent change in observed rates gives a rough measure of the portion of the decline in mortality that can be attributed to risk-factor changes. That portion was about 41 percent for white men, 44 percent for white women, 67 percent for black women, and 81 percent for black men. These results suggest that reduction in risk-factor levels could account for a substantial portion of the decline in CHD mortality, especially among black people. This approach to estimating the impact of risk factors on CHD mortality involves several assumptions previously discussed and is useful only as a rough indicator. Furthermore, the sampling variation in the estimates is substantial.

Conclusion

This article has examined recent changes in national prevalence of elevated blood pressure, cigarette smoking, and elevated serum cholesterol and the contribution of these changes to the decline in coronary heart disease mortality. During the 1970's, there was a substantial decline in the prevalence of elevated blood pressure. A small decrease in the prevalence of smoking was also observed. However, the change in the prevalence of elevated cholesterol was not statistically significant.

These decreases in risk-factor prevalence are encouraging, especially in instances where high-risk subgroups show substantial declines. For example, black men and women showed the greatest reductions in the proportion with two or more elevated risk factors between NHANES I and NHANES II. As a result, the race differentials so evident in NHANES I narrowed substantially by NHANES II. Furthermore, by applying a model developed in the Framingham Heart Study to the risk-factor measurements in the two surveys, it appeared that the joint impact of these risk-factor changes may account for a substantial portion of the decline in CHD mortality, especially among black people.

The declines in risk factors have come about after sustained effort on the part of voluntary and government agencies to inform the public about the benefits of hypertension control, cessation of smoking, exercise, and a more healthy lifestyle in general. Although it is not possible to verify a causal link between these events, the temporal sequence suggests that changes were accelerated by making information available to the public and health professionals. For example, the decline in smoking began just after the release of the first Surgeon General's Report on Smoking and Health (Warner, 1981). Similarly, decline in prevalence of elevated blood pressure was barely evident between 1960–62 and 1971–75 (National Center for Health Statistics, 1981). Yet the decline between 1971–75 and 1976–80 coincides with several programs to inform physicians and the public about the benefits of hypertension control (Hypertension Study Group, 1971; National Heart and Lung Institute, 1973; Stross, 1981; Stamler, 1976; Levy, 1982).

However, the link between the declines in risk factors and the decline in CHD mortality is even more difficult to ascertain. Although the results presented here suggest that risk-factor reduction could have accounted for a substantial part of the decline in CHD mortality, the methodology used is approximate and subject to many limitations (Kleinman et al., 1979; Kleinman et al., 1981). The only direct way to investigate the effects of risk-factor change on CHD mortality is through the use of randomized clinical trials. Unfortunately, the results of the few such trials that have been undertaken are somewhat equivocal.

The Multiple Risk Factor Intervention Trial (MRFIT) was the largest such study designed to determine whether reductions in smoking, cholesterol, and blood pressure had an effect on heart disease mortality among high-risk, middle-aged men (National Institutes of Health, 1982). MRFIT did not demonstrate a statistically significant difference in coronary heart disease mortality between a group with "Special Intervention" and one with "Usual Care" for more than 6 years of followup. The unexpectedly low CHD mortality rates in the "Usual Care" group reduced the probability of being able to detect a significant difference in death rates. It should be noted, however, that declines in risk factors were nearly matched by the participants in the two groups.

Other problems in interpreting the results from MRFIT and other intervention trials have been discussed by several authors (Freis, 1982; Kuller, 1980; Lundberg, 1982; Marwick, 1982). The efficacy of certain interventions, especially when risk factors are only moderately elevated, remains controversial. However, the values of not smoking and of reducing very high blood pressure and cholesterol levels are generally agreed upon. Previous studies indicate that the prevalence of elevated cholesterol declined between 1960–62 and 1971–74 (National Center for Health Statistics, 1978) and that the prevalence of smoking declined since the mid-1960's (Kleinman et al., 1979). The data presented here show that the prevalence of elevated blood pressure declined between 1971–75 and 1976–80. Although definitive evidence linking the reduction in risk-factor levels to the decline in CHD mortality is lacking, the results

presented in this article suggest that changes in risk-factor levels could account for a portion of the mortality decline.

References

Freis, E. D.: Should mild hypertension be treated? *New Engl. J. Med.* 307(5):306–309, July 1982.

Gillum, R. F.: Coronary heart disease in black populations. *Am. Heart J.* 104(4):839–864, Oct. 1982.

Gillum, R. F., Blackburn, H., and Feinleib, M.: Current strategies for explaining the decline in ischemic heart disease mortality. *J. Chronic Dis.* 35(6):467–474, 1982.

Gordon, T., and Kannel, W. B.: Multiple risk functions for predicting coronary heart disease, The concept, accuracy, and application. *Am. Heart J.* 103(6):1031–1039, June 1982.

Hypertension Study Group of the Inter-Society Commission on Heart Disease Resources: Guidelines for the detection, diagnosis and management of hypertensive populations. *Circulation* 44(5):A263–A272, Nov. 1971.

Kannel, W. B.: Meaning of the downward trend in cardiovascular mortality. *JAMA* 247(6):877–880, Feb. 1982

Kleinman, J. C., Feldman, J. J., and Monk, M. A.: The effects of changes in smoking habits on coronary heart disease mortality. *Am. J. Public Health* 69(8):795–802, Aug. 1979.

Kleinman, J. C., DeGruttola, V. G., Cohen, B. B., and Madans, J. H.: Regional and urban-suburban differentials in coronary heart disease mortality and risk factor prevalence. *J. Chronic Dis.* 34(1):11–19, 1981.

Kuller, L. H.: Prevention of cardiovascular disease and risk-factor intervention trials. *Circulation* 61(1):26–28, Jan. 1980.

Levy, R. I.: The National Heart, Lung, and Blood Institute, Overview 1980, The Director's report to the NHLBI Advisory Council. *Circulation* 65(2):217–225, Feb. 1982.

Lundberg, G. D.: MRFIT and the goals of The Journal. *JAMA* 248(12):1501, Sept. 1982.

Marwick, C.: "Mild" hypertension, The gray zone gets more confusing. *Medical World News* 66–85, Dec. 20, 1982.

McGee, D., and Gordon, T.: The results of the Framingham Study applied to four other U.S.-based epidemiologic studies of coronary heart disease. *The Framingham Study.* Section 31. DHEW Pub. No. (NIH) 76–1083. National Institutes of Health. Washington. U.S. Government Printing Office, 1976.

National Center for Health Statistics: Total serum cholesterol levels of adults 18–74 years, United States, 1971–1974, by S. Abraham, C. L. Johnson, and M. Carroll. *Vital and Health Statistics.* Series 11-No. 205. DHEW Pub. No. (PHS) 79–1652. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1978.

National Center for Health Statistics: Hypertension in adults 25–74 years of age, United States, 1971–1975, by J. Roberts and M. Rowland. *Vital and Health Statistics.* Series 11-No. 221. DHHS Pub. No. (PHS) 81–1671. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1981.

National Center for Health Statistics: Births, marriages, divorces, and deaths, United States, 1982. *Monthly Vital Statistics Report,* Vol. 31, No. 7. DHHS Pub. No. (PHS) 82–1120. Public Health Service. Hyattsville, Md. Oct. 1982a.

National Center for Health Statistics: The National Ambulatory Medical Care Survey, United States, 1979 Summary, by R. O. Gagnon, J. E. DeLozier, and T. McLemore. *Vital and Health Statistics.* Series 13-No. 66. DHHS Pub. No. (PHS) 82–1727. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1982b.

National Center for Health Statistics: Utilization of short-stay hospitals, Annual summary for the United States, 1980, by B. J. Haupt. *Vital and Health Statistics.* Series 13-No. 64. DHHS Pub. No. (PHS) 82–1725. Public Health Service. Washington. U.S. Government Printing Office, Mar. 1982c.

National Center for Health Statistics: Blood pressure levels and hypertension in persons ages 6–74 years, United States, 1976–80, by M. Rowland and J. Roberts. *Advance Data From Vital and Health Statistics.* No. 84, DHHS Pub. No. (PHS) 82–1250. Public Health Service. Hyattsville, Md. Oct. 8, 1982d.

National Heart and Lung Institute: *National Conference on High Blood Pressure Education, Report of Proceedings.* DHEW Pub. No. (NIH) 73–486. National Institutes of Health. Washington. U.S. Government Printing Office, 1973.

National Institutes of Health: National Heart, Lung and Blood Institute. Multiple Risk Factor Intervention Trial. *JAMA* 248(12):1465–1477, Sept. 1982.

Pooling Project Research Group: Relationship of blood pressure, serum cholesterol, smoking habit, relative weight and ECG abnormalities to incidence of major coronary events, Final report of the Pooling Project. *J. Chronic Dis.* 31(4):201–306, 1978.

Rice, D. P.: Sex Differences in Mortality and Morbidity, Some Aspects of the Economic Burden. Paper presented at the Australian National University, United Nations, World Health Organization meeting on Sex Differentials in Mortality, Trends, Determinants, and Consequences. Canberra, Australia, Dec. 4, 1981.

Shurtleff, D.: Some characteristics related to the incidence of cardiovascular disease and death. *The Framingham Study.* Section 30. DHEW Pub. No. (NIH) 74–599. National Institutes of Health. Washington. U.S. Government Printing Office, 1974.

Stamler, J., Stamler, R., Riedlinger, W. F., et al.: Hypertension screening of 1 million Americans, Community Hypertension Evaluation Clinic (CHEC) Program, 1973 through 1975. *JAMA* 235(21):2299–2306, May 1976.

Stross, J. K., and Harlan, W. R.: Dissemination of relevant information on hypertension. *JAMA* 246(4):360–362, July 1981.

Warner, K. E.: Cigarette smoking in the 1970's, The impact of the antismoking campaign on consumption. *Science* 211(13):729–731, Feb. 1981.

APPENDIX B

NORTH CAROLINA DATA AND TRENDS

Contents

TABLE 1

MORTALITY STATISTICS FOR 1984 AND 1980-84

NORTH CAROLINA RESIDENTS

Cause of Death - Ninth Revision International Classification of Diseases		Number of deaths 1984	Death Rate 1984	Death Rate 1980-84
All Causes		51,032	8.27	8.21
Diseases of Heart	(390-398,402,404-429)	18,870	306.12	303.31
Acute Myocardial Infarction	(410)	8,057	130.70	133.62
Other Forms of Ischemic Heart Disease	(411-414)	5,010	81.27	81.21
Hypertension with or without Renal Disease	(401,403)	244	3.95	4.04
Cerebrovascular Disease	(430-438)	4,512	73.19	76.75
Atherosclerosis	(440)	536	8.69	9.21
Cancer	(140-208)	10,649	172.75	168.60
Stomach	(151)	290	4.70	4.69
Colon, Rectum, and Anus	(153,154)	1,094	17.74	17.90
Pancreas	(157)	586	9.50	9.18
Trachea, Bronchus, and Lung	(162)	2,941	47.71	44.33
Female Breast	(174)	918	28.92	27.06
Cervix Uteri	(180)	149	4.69	5.04
Ovary and Other Uterine Adnexa	(183)	273	8.60	7.88
Prostate	(185)	668	22.34	21.89
Leukemia	(204-208)	389	6.31	6.56
Diabetes Mellitus	(250)	873	14.16	13.84
Pneumonia and Influenza	(480-487)	1,428	23.16	22.20
Chronic Obstructive Pulmonary Disease and Allied Conditions	(490-496)	1,491	24.18	22.78
Chronic Liver Disease and Cirrhosis	(571)	591	9.58	10.37
Nephritis, Nephrotic Syndrome, & Nephrosis	(580-589)	542	8.79	8.58
Motor Vehicle Accidents	(810-825)	1,484	24.07	23.96
All Other Accidents and Adverse Effects	(800-807, 826-949)	1,399	22.69	24.24
Suicide	(950-959)	820	13.30	12.58
Homicide	(960-978)	523	8.48	9.98

YEARS-OF-LIFE LOST BY CAUSE-OF-DEATH CATEGORY

FOR NORTH CAROLINA RESIDENTS IN 1984*

DEATH CATEGORY	TOTAL NUMBER OF DEATHS	TOTAL YEARS OF LIFE LOST
Heart Disease	18,849	90,948
Hypertension	244	1,072
Cerebrovascular Disease	4,508	17,763
Atherosclerosis	536	837
Total Cancer	10,648	92,135
Diabetes Mellitus	872	6,564
Pneunomia/Influenza	1,412	5,328
Chronic Obst. Pul. Disease	1,488	7,628
Chronic Liver Dis./Cirrhosis	591	9,108
Nephritis/Nephrosis	535	2,644
Motor Vehicle Accidents	1,478	53,078
All Other Accidents	1,381	29,167
Suicide	820	23,005
Homicide	518	16,918
All Other Causes	6,075	55,693
All Infant Deaths	1,077	76,857
FINAL TOTALS	51,032	488,745

*Used race-sex specific life expectancies, 1984:

White males	70
Non white males	64
White females	79
Non white females	73

ECONOMIC LOSS RELATING TO ADULT PREMATURE MORTALITY, 1981

If 65 is used as the end-point of the working life span, premature deaths occurring in 1981 before age 65 were 279,073 person years; and 194,555 person years in the working population. The economic impact due to loss of productivity is an astounding $2,154,487,672! This accounts only for taxable income, state and federal income tax loss, social security contributions lost and general sales tax lost. It does not account for cost of medical care, social support via social services, retirement or any survivors nor does it account for the cost of replacing the individual who is lost.

APPENDIX C

EVIDENCE THAT HEALTH PROMOTION WORKS

Contents

Letter from Marshall W. Kreuter of Centers for Disease Control, U.S. Public Health Service, Atlanta.

Also in DHR report but not included in Legislative Research Commission report:

Iverson, Donald C., "Making the Case for Health Promotion: A Summary of the Scientific Evidence," Promoting Health, May-June 1984.

Bellingham, Richard et al, "The AT&T Communications Total Life Concept," Corporate Commentary, Vol. 1, Number 4, June 1985.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta, GA 30333

Dear Health Education Colleague:

A few weeks ago I was asked to put into a memo my response to the question: "Does health education work?" Since that question is often put to health educators and health promotion advocates, I thought you might be interested in my response. Please note that I have borrowed liberally from the thinking of others, especially Larry Green in this case. So, for what it may be worth, here it is.

If you ask a physician if medicine "works," he/she would probably respond that "it depends." It depends on whether by "work" you mean "cure" or "relieve" symptoms. It would also depend on the severity and length of time the patient has had the condition. Furthermore, in cases where medication is self-administered by the patient, its efficacy is dependent upon whether it is taken correctly--perhaps at the right time, without alcohol, with food and so on.

Inevitably the question of efficacy is always contingent on a host of factors. So it is with public health education. Both must use careful diagnostic procedures to maximize the probability that the prescription given is appropriate for all things considered. Just as no thinking person would ever sincerely deny the value of medicine, neither would they question the importance of education; the very principles of democratic society are dependent upon an educated, enlightened and participating public. With that assumption in mind, the question of "does education work" is a philosophic, political and empirical contradiction of terms.

As is the case for medicine, the appropriate question for health education is not "does it work?" but "how does it work?" Here are a few documented generalizations.

1. Multiple intervention approaches when used either in patient settings (1) or community settings (2) tend to be effective in modifying risk factors: smoking (3), compliance (4) blood pressure (5,6), and cholesterol (7). (These all show statistically significant differences with controls.)

2. School health education efforts, when the target is comprehensive (not limited to a given disease, organ system or behavior) will result in significant cognitive and affective changes if teachers have been properly prepared and the curriculum is geared toward the appropriate developmental level (8,9). Some new collaborative efforts involving schools, communities and families have shown encouraging results when targeted on specific health problems, e.g., cardiovascular risk factors(10).

3. Behavioral change in school settings is difficult but attainable. Statistically significant decreases in smoking behavior have been occasionally demonstrated (11), but the most consistant results are found in the dental health education literature (12). In some cases, dramatic improvements (both clinical and statistical) have been shown in periodontal disease indices.

4. The promising results of the Stanford Three (now Five) Community Study, the North Karelia Project and MR. FIT are reinforced by Warner's work (13), whose time series regression analysis which examined smoking trends in the U.S. from 1930, indicates that in the absence of a national antismoking campaign (general rather than discrete events), consumption would have exceeded its 1978 level by more than one third. These studies and our own risk reduction efforts provide some evidence that large-scale multiple public health interventions can contribute to a decrease in risk factors and a concurrent improvement in health status. Scientific and academic debate of course is ongoing as to: a) what portion of the variance of change is attributable to what dimension of the intervention and b) does the benefit justify the cost?

5. The important questions above constitute one of the challenges we are anxious to take on in the Health Education Division of CHPE. For example, our group would hypothesize that the MR. FIT findings are not simply a reflection of secular trends. The latter assumption would lead us to conclude that the intensive intervention was no greater in its effect than the normal course of events. While public awareness and sensitivity to healthy behavior has certainly increased in the 10 year period between 1970-1980, we suspect that control subjects (usual care) in MR. FIT may have received behavioral interventions that were equal to and, in some cases, greater than the experimental subjects! Retrospective, interview studies of usual care subjects may well render important insights to yet unanswered questions on this matter. We feel that such an approach to evaluation may have promise for answering questions on the efficacy of school health education as well.

6. These are most exciting times for public health promotion advocates. With better baseline data (e.g., CDC's use of risk prevalence surveys at the State level) we are developing a "behavioral epidemiology." We have a more sophisticated health education planning mechanism. We are experiencing the infusion of talented behavioral scientists into the field; this greatly strengthens our own theory and methodology base. Our knowledge of how to assess the affects of educational programs in the health field is improving. Our risk reduction efforts with the states was an innovative and highly successful first step. We need to step-up our lead role and continue to generate leadership in this new but fundamentally important dimension of public health.

Marshall W. Kreuter, Ph.D.

REFERENCES

1. Green LW, et al. Clinical trials of health education for hypertensive outpatients: design and baseline data. Prev Med 1975;4417-425.

2. National High Blood Pressure Education Program. Patient tracking in hypertension control-summary of interim results of study. October, 1978.

3. Bartlett EE. A review of previous case studies. Physician's Patient Educ Newsletter 1981;4:5-6.

4. Haynes RB, et al. Improvement of medication compliance in uncontrolled hypertension. Lancet 1976;1:1265-1268.

5. Stahl SM, Lawrie T, Neill P, Kelly C. Motivational interventions in community hypertension screening. Am J Pub Health 1977;67:345.

6. Levine DM, et al. Health education for hypertensive patients. J Am Med Assoc 1979;241:1700-1703.

7. McAlister A, Puska P, Salonen JT. Theory and action for health promotion: illustrations from the North Karelia Project. Am J Pub Health 1981;72:43-50.

8. Green LW, et al. The school health curriculum project: its theory, practice, and measurement experience. Health Educ Q 1980;7:14-34.

9. Milne AM, et al. A study of the impact of the school health curriculum project on knowledge, attitude, and behavior of teenage students. Atlanta: Bureau of Health Education, Center for Disease Control, 1975.

10. Hopp JW. A health education program for parents and children who exhibit high risk factors of coronary heart disease. Paper presented at the annual meeting of the American Alliance for Health, Physical Education, and Recreation, Kansas City, April, 1978.

11. Perry C, et al. Modifying smoking behavior of teenagers: a school-based intervention. Am J Pub Health 1980;70:722-725.

12. Gravelle HR, et al. The oral hygiene of high school students as affected by three different education programs. J Public Health Den 1967;27:91-99.

13. Warner, R. Cigarette smoking in the 1970's. The impact of the antismoking campaign on consumption. Science Feb. 13, 1981, 729-731.

APPENDIX D

RISK REDUCTION PROGRAM INFORMATION

Contents

Risk Reduction Program Guidance

Risk Reduction Program
Health Promotion Branch
Adult Health Services Section
North Carolina Division of Health Services
P.O. Box 2091
Raleigh, NC 27602

November 1984
Revised February 1985

Purpose

This Risk Reduction Program Guidance has been developed to assist local health departments and non-profit agencies to plan risk reduction projects. Risk reduction project plans may be used to develop an application for program funds from the Adult Health Services Section Risk Reduction Program. For additional information on program funding, proposal development, available resources, and consultation and technical assistance, please contact the North Carolina Division of Health Services Regional Office Consultants as listed in Appendix A.

Risk Reduction Program Guidance
Table of Contents

Risk Reduction Program Guidance
Introduction

It is recognized that approximately 50% of mortality is related to lifestyle or unhealthy behaviors. These lifestyle risks include obesity and nutritional deficiencies, lack of exercise, stress, and injury-conducive behavior. Dramatic reductions in many of the leading causes of death can be brought about through preventive measures which focus on reducing lifestyle risk factors.

An examination of 1981 mortality statistics in North Carolina reveals that as a population, North Carolinians have a need to reduce health risk factors. North Carolina exceeds the United States death rates in heart disease (by 7.8%); cerebrovascular disease (by 27.3%); kidney disease (by 31.1%); motor vehicles (by 13.5%); suicides (by 7.7%); and other accidents and adverse effects (by 17.6%).

In May 1982, a statewide survey revealed that North Carolina adults have a high prevalence of risk factors that have been associated with the leading causes of death. These risk factors were sedentary lifestyle, obesity, cigarette smoking, uncontrolled high blood pressure, alcohol misuse, and failure to use seat belts.

Based on the above study, it has been suggested that North Carolina adults are among the most unhealthy in the country. North Carolina had the highest percentage of cigarette smokers with 37.1 percent of persons interviewed reporting that they smoke tobacco. This can be compared to the national level of cigarette smoking, which is 32.4 percent. North Carolina also ranked among the top in the obesity category with 25.2 percent reporting obesity. The prevalence of obesity in the nation is 22.4 percent. Over 64 percent of those who responded in the survey said they did not use seatbelts, which is a similiarly high rate for persons throughout the country. North Carolina also had a higher than average percentage of the population with a sedentary lifestyle and with uncontrolled hypertension. In terms of drinking and driving North Carolina is fairly average. Fewer North Carolinians reported acute heavy drinking than adults in other states. The prevalence of chronic disease risk factors is associated with premature death in North Carolina.

There are approximately 49,000 deaths from all causes in North Carolina annually. Approximately 16,500 of these deaths -- or about one-third -- occur between the ages of 18 and 64 years. These deaths are called premature adult deaths. Premature adults deaths are of extreme concern for three reasons: 1) they are a cause of hardship for North Carolina families and friends; 2) they occur during the peak productive years of life and thus cost North Carolina $2.1 billion dollars in work loss and taxes*; and 3) more than <u>half</u> of premature adult deaths can be prevented by changing lifestyle or eliminating risk factors.

It is apparent that North Carolinians have a need and an opportunity to improve their health. Furthermore, risk reduction interventions have proved effective in assisting persons to change their lifestyle and thus prevent chronic diseases and injuries.

*This cost is greater than the entire budget of the North Carolina Department of Human Resources, which is approximately $1.5 billion annually.

Goals and Scope of the Risk Reduction Program

North Carolina's Risk Reduction Program activities are intended to contribute to national objectives for health promotion which are presented in Promoting Health, Preventing Disease: Objectives for the Nation.

The goals of the Risk Reduction Program are:

1. To reduce the prevalence of morbidity and mortality related to chronic diseases and injuries.

2. To reduce the prevalence of risk factors related to major causes of morbidity and mortality specifically the lifestyle risks of obesity and nutritional deficiencies, lack of exercise, stress, and injury-conducive behavior.

The Risk Reduction Program, one of the Adult Health Services Section Health Promotion and Disease Prevention Programs, is targeted towards lifestyle risks with emphasis on primary prevention. Primary prevention involves actions to enhance optimal health and to reduce the risk of becoming ill or disabled.

The Adult Health Services Section Risk Reduction Program will provide funds, technical assistance, training, consultation, and media and other program materials to local health departments and nonprofit and community-based organizations to develop innovative strategies to promote healthy lifestyles.

- Priority areas for the Risk Reduction Program include nutrition and weight control, physical fitness and exercise, stress management, and injury prevention.

- The target population is adults 18 years and older who are at high risk.

The risk reduction projects may develop, implement, and evaluate community-based interventions to reduce risk factor(s) in defined target populations.

- A defined target population includes answers to the following questions:
  - who is in the population, e.g. adults over 60 years of age, farmworkers.
  - how many people does this include, e.g. 300 persons, 700 persons.
  - where are they located, e.g. in Johnson township, in Harris County, at the Miller Industrial plant.

- An intervention is a specific planned strategy designed to bring about a desirable change of health status in a client or target population. Intervention activities are provided to a defined target population and are designed to address at least one specific health risk. Examples of risk reduction intervention activities may be found in Appendix B.

- o Depending upon local needs and available resources, agencies who implement risk reduction interventions may choose the following roles:
  - To coordinate the project and utilize existing community resources for the interventions.
  - To develop and provide the interventions; a fee could be charged for the activities.
  - A combination of the above.

- o The Adult Health Services Section Risk Reduction Program is emphasizing community-based interventions. Community-based interventions include but are not limited to interventions at worksites, in community settings or in churches. It is most important that the interventions are provided in the setting where there is the opportunity for the greatest impact on the target population.

- o An example of a Risk Reduction Project focused on a defined target population and specific risk may be found in Appendix C.

Elements of Successful Risk Reduction Interventions*

The bottom line of risk reduction is long-term change of behaviors. Overeating, lack of exercise, excessive stress, smoking, lack of seat belt use, and alcohol misuse are behaviors that can be changed to improve health. These behaviors are frequently difficult to change because they involve personal habits which have been formed over many years. Knowledge about the health risks of certain behaviors is seldom enough to bring about changes in behavior. People require frequent positive reinforcement that a change to a healthy lifestyle "habit" is a good idea.

While risk reduction projects vary in the manner in which they are administered, successful ones share some common components which can be briefly identified. Although some may contribute more significantly to program success, each is important enough that project effectiveness would be severely impaired by its absence.

I. Administrative/Management Component

- o Management Support

  Although it would seem apparent, the support from top management of the sponsoring agency is a vital factor in the successful outcome of a risk factor intervention program. With this support, obstacles, and road blocks can be avoided or overcome so that project staff can devote their time, skills and energies to the participants and their risk reduction project.

- o Adequate/Qualified Staff

  Successful programs have qualified staff to conduct a community-based risk reduction project. This may mean that existing staff such as a health educator, nurse, or nutritionist, may need to attend training sessions, read current articles on risk reduction interventions, and talk to other people who are knowledgeable in this area. Another important consideration is to match staff time with the nature and scope of the risk reduction interventions. A staff person who can only devote 25%-50% of work time to a risk reduction project should consider these suggestions:
  - plan a manageable project which is limited in scope and in the number of participants
  - assume a role of coordinating and utilizing existing community resources
  - contract for additional part-time staff, e.g. a successful past project participant, college faculty, students, etc.
  - contract with other agencies to provide the intervention(s)

*Adapted from Framework for Health Promotion in California, California Department of Health Services, September 1983, pp. 53-54.

- Publicity/Public Relations

Successful projects cite publicity as an important factor in their ability to assist people to reduce their risks. Publicity in this context means the ways the information about the project and its services is distributed to the target population. Notices in newspapers, radio and TV spots giving details of services, special features on project goals and concepts and, more importantly, word of mouth, are identified by existing projects as contributing to their success in reaching clients and motivating them to participate in the risk reduction activities. It should be recognized that publicity or media alone cannot produce a significant change in risk reduction behaviors.

II. Participant/Target Population Component

- Participant Involvement

Risk Reduction programs must be "targeted" appropriately--and respond to a perceived need of the target group. Sometimes, enthusiastic health professionals "decide" what certain groups need instead of asking and seeking ideas from participants. Effective risk reduction projects involve the target population in defining their own risks or problems and planning appropriate interventions to meet their needs. Project objectives and interventions may have to be modified after the project plan is completed. Project staff need to be flexible and willing to change plans if a particular approach does not seem as though it will work for the target group.

- Support and Maintenance

Risk reduction projects often stress self management. Such projects encourage participants to set their own behavior change objectives and to monitor their progress with regard to these objectives. Projects that include follow through and plan for the development of social support greatly increase their success rate. The project may take responsibility for following up on client progress at regular intervals. In addition, the project may include the establishment of social support systems which reinforce a desired behavior change. These might be formal, for example the implementation of a fitness class in a work setting in which co-workers can encourage one another to participate. Other social supports may be informal, for example a spouse of an overweight person may join that person in evening walks.

III. Intervention Methods Component

- Multiple Inverventions

It has been shown that Risk Reduction Projects which employ a variety of intervention methods tend to be more effective in modifying risk factors. Human nature dictates that what motivates one person to change a behavior may not work for another person. For example, an educational session at a local health department on the importance of exercise in reducing cardiovascular risks may inspire some to begin a walking program. Another person may join a walking club at a community center because of the social contact the group provides. For someone else, a television spot which shows a trim Miss North Carolina exercising, may prompt the initiation of a jogging program. In other words, different people respond to different interventions. For this reason a project with multiple interventions is likely to reach more people in the target audience. A variety of interventions also provides more opportunities for the positive reinforcement needed for behavior change. If a person encounters a health message in a variety of settings and in several different forms it is more likely that the message will be remembered and reinforced and that action will be taken based on it. Providing multiple interventions is a key principle in effective risk reduction projects.

- Consideration of the Environment

The environment, that is--circumstances at work, at home, and in social and community settings--is often a determining influence on behavior and may be a direct influence on health. Thus an important risk reduction intervention can be an environmental change that creates opportunity for healthy actions and improves various unfavorable conditions. Examples of interventions that may create a change in the environment are the following: provision of fitness classes and healthy foods at the worksite; increasing healthy foods choices in restaurants; bike path development; and improved traffic signals where excessive traffic accidents occur.

IV. Community Organization/Support Component

Community support is repeatedly cited as a necessary component to the effectiveness of risk reduction projects. Many voluntary agencies are vitally interested in healthy diets, fitness, and stress management because they are committed to prevention of premature deaths due to heart disease, cancer, and stroke. Businesses and industries are interested in risk reduction programs because worksite prorams can improve employee morale, decrease absenteeism, and reduce worker's compensation claims. Recreation departments are interested in developing fitness programs in the community. Having the support, cooperation, and participation of interested community groups and agencies gives a project more credibility in the broader community context than if the project remained isolated in one agency.

Additionally, other agencies can provide resources and expand the project's capability. Cooperation among groups with similiar goals maximizes all the resources available to the target population and assures a wider spread of the lifestyle health improvement message.

Suggested Steps in Developing a Successful Risk Reduction Project

Just as there are elements common to successful risk reduction interventions, risk reduction projects that are well planned are more likely to be effective. Below are steps that are important to project development. Under ideal circumstances, each of these steps would be planned, and planned somewhat sequentially. What may happen is that a combination of enthusiasm and limits on planning time available result in activities being carried on simultaneously.

1. Obtain the support of the agency's management and the administrative decision-maker.

2. Define management's commitment to the program, e.g. personnel, funding, time, etc.

3. Designate a project director who will be qualified to conduct a community-based risk reduction project.

4. Recruit and orient an ad hoc committee that is broad based, involving people who are critical to effective project planning and development.

5. Perform a community needs assessment for health promotion/risk reduction programs.
   - o Describe community health status
   - o Identify gaps and deficiencies in resources
   - o Identify and describe defined target population(s)
   - o Define problem(s), issue(s), priority health risk(s) of defined target population(s)

6. Reevaluate ad hoc committee; recruit new committee members, if needed. Representatives from the target population should be included.

7. Develop project proposal, including defined target population(s), problem(s), and priority health risk(s); objectives; intervention activities; quality assurance; and budget.

8. Present project proposal to management.

9. Modify project proposal as needed.

10. Secure final approval of project proposal.

11. Secure project resources.

12. Promote and publicize project; recruit participants.

13. Implement project.

14. Modify project, if needed; project should be custom-made to match the needs and interests of the target population.

15. Establish project quality assurance: evaluation, follow-up and maintenance.

Summary

North Carolina adults have a need and an opportunity to improve their health through risk reduction efforts. The Adult Health Services Section Risk Reduction Program is committed to providing program funds, resources, and technical assistance to local health departments and non-profit agencies that want to develop interventions to reduce risk factors in defined target populations. Successful efforts to reduce risk factors will bring about reductions in premature morbidity and mortality in North Carolina.

APPENDIX A

Regional Office Consultants

North Carolina Division of Health Services

Office	Address	Telephone No.
Western Regional Office	Division of Health Services Black Mountain, NC 28711 (Courier 683)	(704) 669-3351

*Adult Health Nurse Coordinator:	Christine Boggan
*Adult Health Nurse Consultant:	Eris Russell
Health Education Consultants:	Sylvia Saxon
	Mike Vinson
Nutrition Consultants:	Martha Shinn
	Elizabeth Fieselman
	Gina Shisler

Office	Address	Telephone No.
North Central Regional Office	310 E. Third St. Suite 200 Winston Salem, NC 27101 (Courier 228)	(919) 761-2390

*Adult Health Nurse Coordinator:	Dorothy Donnelly
Health Education Consultant:	Pat Carr
Nutrition Consultants:	Ann McLain
	Judy Foreso

Office	Address	Telephone No.
South Central Regional Office	Division of Health Services Wachovia Bank Building Suite 506, 225 Green St. Fayetteville, NC 28301 (Courier 106-A)	(919) 486-1191

*Adult Health Nurse Coordinator:	Annie Hayes
*Adult Health Nurse Consultant:	Jackie Houston
Health Education Consultant:	Jane Matthis
Nutrition Consultants:	Vera Bullock
	Judy Foreso

Office	Address	Telephone No.
Eastern Regional Office	Division of Health Services 404 St. Andrews Drive Greenville, NC 27834 (Courier 146)	(919) 756-1343

*Adult Health Nurse Coordinator:	Peg Rosett
*Adult Health Nurse Consultant:	Lottie Daw
Health Education Consultants:	Carlton Adams
	Jeanne Palmer
Nutrition Consultants:	Nellie Calloway
	Carolyn Sparks
	Janet Bryan

* Adult Health Nurse Coordinators and Consultants should be the primary contact for the Adult Health Services Section Risk Reduction Program.

APPENDIX B
Examples Of Risk Reduction Interventions

The risk reduction interventions are listed below to stimulate thinking about the many creative activities that are possible in a risk reduction project. It is important to emphasize, however, that a careful definition of the health problem(s) and issues(s) of the target population must be completed before selecting interventions. Those interventions that will enable the project to have the best chance for success should be chosen. In addition, the target population should be actively involved in selecting and implementing the interventions.

Setting	Intervention
Work Sites	Education and counseling, support groups and skills development training on nutrition, stress, fitness, or injury prevention
	Provision of exercise facilities or development of fitness trails around worksite area
	Fitness classes
	Relaxation breaks
	Walking program
	Cafeteria programs to promote good nutrition - provision of healthy foods - provision of food information, e.g. calories, sodium, etc. - prizes for correct answers to daily nutrition questions
	Policies and programs to ensure a safe and healthy work environment
	Reduction of stress in work environment - classes on interpersonal communications, time management - increased flexibility with work time
	Weight loss competition between businesses or work groups
	Company picnics with health-promoting activities
	Provision of healthy foods from vending machines
	Sponsor fun runs and other fitness competitions in the community
	Publicity including posters, signs, announcements at staff meeting

Examples of Risk Reduction Interventions (Con't)

Setting	Intervention
Communities	Development of walking, jogging and fitness trails
	Organize volunteers to assist older adults in a "safe home" campaign
	Seat belt incentive program
	Improved nutrition information through food shelf labeling, educational programs at point of food purchase, e.g. grocery stores, restaurants
	Education and counseling, support groups, and skills development training in housing units or community centers on nutrition, stress, fitness and injury prevention
	Community fun runs/walks
	Healthy food competition
	Media campaigns--newspapers, radio, TV, posters, stickers, bulletins, signs
	Cooking parties
	Food demonstrations
	Increase the number of smoke detectors in high risk homes in cooperation with the fire department
	Printed messages on grocery bags
	Distribute educational literature about storing toxic products in grocery bags
	Work with fire department to install or encourage installation of smoke detectors and regular battery checks
	Educate private health professionals on lifestyle risk factor interventions
	Fitness classes

Examples of Risk Reduction Interventions (Con't)

Setting	Intervention
Churches	Education counseling, support groups, and skills development training on nutrition, stress, fitness, or injury prevention
	Healthy food competition at church suppers
	Walking groups
	Fitness classes
	Bereavement counseling
	Seat belt incentive programs
	Sponsor "safety checks" for church buildings and members' homes by local public safety officers
	Training for lay advisors
Health Care Settings	Education counseling, support groups, and skills development training on nutrition, stress fitness, or injury prevention
	Community fun runs/walks
	Healthy food competition
	Media campaigns--newspapers, radio, TV, posters, stickers, bulletins, signs
	Self care education
	Publicity campaigns--signs, posters, stickers
	Outreach program
	Walking/jogging groups

APPENDIX C

Example of a Risk Reduction Initiative Project Focused on a Defined Target Population and a Specific Risk Factor

The "Floss" Risk Reduction Initiative Project

The following fictional project illustrates key components of an application for Risk Reduction Program funds. This example is not intended to be a complete Risk Reduction proposal. The illustrative risk factor, poor dental care due to infrequent flossing, should not be interpreted as a priority for the North Carolina Risk Reduction Program.

The "Floss" Project Director is a health educator who allocates 25% of her time to the project. She assumes a coordination role in the project, utilizing existing community resources. The setting for the project is a worksite. The company nurse at the worksite will be responsible for the implementation of the interventions.

DEFINED TARGET POPULATION/SETTING: The target population is 300 adults, 18-65 years of age, employed by a manufacturing company. Eighty percent (80%) of this workforce is female.

DEFINED PROBLEM: Company management is very concerned about the excessive costs of dental insurance claims. Records show that employees have an unusually high prevalence of periodontal disease. A survey indicates that 80% of employees do not floss their teeth. However, employees are very concerned about loss of teeth, appearance, and mouth discomfort.

OBJECTIVES:

1) There will be an X% reduction in periodontal disease as indicated by company dental claims by (date).
2) There will be an X% reduction in total cost of dental claims by (date).
3) X% of employees will be able to identify two activities of the "Floss" project by (date).
4) X% of employees will attend an educational program on good dental health and how to floss their teeth by (date).
5) Dental floss will be available in X% of company restrooms by (date).
6) X% of employees will be able to accurately explain why flossing is important.
7) X% of employees will effectively demonstrate how to floss their teeth by (date).
8) X% of employees will floss their teeth 4 times per week by (date).

10 NCAC 8A .1001 through .1008 has been adopted as follows:

.1000 - Adult Health Promotion and Disease Prevention Program

.1001 GENERAL

(a) The purpose of the Adult Health Promotion and Disease Prevention Program is to provide services to reduce morbidity, disability and premature mortality among adults by preventing or reducing the risks for chronic diseases and accidents.

(b) The Adult Health Promotion and Disease Prevention Program is administered by the Health Promotion Branch, Adult Health Services Section, Division of Health Services, North Carolina Department of Human Resources, P. O. Box 2091, Raleigh, North Carolina 27602, (919) 733-2775.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

.1002 DEFINITIONS

The following definitions shall apply throughout this Section:

(1) "Health promotion and disease prevention" means program activities intended to develop and promote community and individual measures which help individuals to develop lifestyles that can maintain and enhance the state of well being and to develop and promote strategies that protect the population from the consequences of the threat of disease, disability or death.

(2) "Intervention activity" means a specific planned strategy designed to bring about a change of health status in an individual or target population. Intervention activities are provided to a defined target population and are designed to address at least one specific health risk or problem. Intervention activities may be designed to address:
   (a) hypertension
   (b) cancer
   (c) diabetes
   (d) glaucoma
   (e) arthritis
   (f) epilepsy and neurological disorders
   (g) nutrition
   (h) weight control
   (i) physical fitness
   (j) accident prevention
   (k) stress management as related to other health care
   (l) chronic disease detection
   (m) health assessments
   (n) health education

(3) "Program" means the Division of Health Services, Adult Health Services Section Adult Health Promotion and Disease Prevention Program.

(4) "Programmatic approach to health promotion and disease prevention" means a community-based initiative characterized as follows:
  (a) a community is a definable geographic area
  (b) a lead agency or organization within the community is identified and liaisons are established among community agencies to:
    (i) determine the prevalence of risk factors for populations in the community.
    (ii) establish health promotion and disease prevention objectives to address the needs of populations at risk.
    (iii) develop and implement specific intervention activities in pursuit of established objectives.
    (iv) perform a periodic reassessment and evaluation of the community-based health promotion and disease prevention intervention activities.

(5) "Target population" means a defined group of persons toward which health promotion and disease prevention servies and programs will be directed as part of an intervention activity.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

.1003 ROLE OF THE PROGRAM

The Adult Health Promotion and Disease Prevention Program shall:

(1) Coordinate and administer funding contracts for providing health promotion and disease prevention services.

(2) Update and maintain an inventory of ongoing existing health promotion and disease prevention activities in the State.

(3) Maintain working liaisons and relationships directed toward developing cooperative strategies with other State agencies and institutions, voluntary health agencies, professional organizations, and other entities which have potential for affecting health promotion and disease prevention objectives.

(4) Develop and improve surveillance and data systems to identify and record morbidity and mortality of chronic diseases and their related risk factors.

(5) Provide technical and management consultation to contractors and communities to establish, maintain and improve programmatic approaches to health promotion and disease prevention. Such consultation may:
  (a) Assist contractors and community organizations in nurturing mutual interests and complementary efforts.

(b) Identify resources which may assist local efforts.
(c) Provide assistance to determine the prevalence of risks within the community or specific target population, develop local objectives and work plans, and select health promotion and disease prevention methods.

(6) Stimulate and provide program funds to local entities to develop, implement, and maintain health promotion and disease prevention activities and programs.
(7) Document efforts to stimulate intervention activity proposals which address high risk populations and minority target populations.
(8) Monitor contractors to assure that funded activities are adequately carried out.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

.1004 PROVIDER ELIGIBILITY

(a) Any local health department is eligible to apply for program funds to provide health promotion and disease prevention services.

(b) Non-profit or governmental groups such as public health, educational, and voluntary organizations may apply for program funds to provide health promotion and disease prevention services.

History Note: Statutory Authority G.S. 130-A 223;
Eff. January 1, 1985.

.1005 APPLICATIONS FOR PROGRAM FUNDS

(a) Applications for program funds shall be accepted, reviewed, and approved or disapproved two times each fiscal year on a schedule established by the program.

(b) An application for program funds must include a brief plan which describes clearly and concisely information on:

(1) Background and Need:
(A) Political subdivision(s) included in the project.
(B) Structure of the applicant agency.
(C) Current population demographic data.
(D) Morbidity and mortality data.
(E) Rationale for selection of specific target population(s).
(F) Facilities and resources which are or will be available to implement the program.
(G) Interrelationship with other State assisted programs, and other appropriate groups and agencies.

(2) Project Objectives:
  (A) Identify objectives which the applicant proposes to be included as an addendum to the contract between the program and the contractor.
  (B) The objectives, where possible, must be specific, measurable, and realistic.
  (C) The objectives must relate to outcomes which can be described on a community level or specific target group.

(3) Intervention Activities:
  (A) A list of all intervention activities to be provided by the applicant and a description of any contractual or other arrangements entered into or planned for the provision of intervention activities.
  (B) Client eligibility criteria, if any is planned.
  (C) The schedule of fees and/or payments and schedule of discounts for services provided by the applicant, if any is planned.
  (D) Proposed protocols for intervention activity services, if applicable. Such protocols shall include, at a minimum:
    (i) identification and recruitment of target populations
    (ii) screening
    (iii) diagnosis
    (iv) treatment
    (v) referral

(4) Quality Assurance:
  (A) The applicant must set forth a plan to periodically monitor and evaluate the implementation and effectiveness of applied methodologies. The plan must describe:
    (i) Organizational arrangements, including a focus of responsibility, to support the quality assurance program and the provision of high quality health promotion and disease prevention services.
    (ii) Periodic assessment of the appropriateness and the quality of services provided to persons and to the community served by the applicant. Such assessments shall:
      (I) Be conducted by qualified health professionals or under the supervision of such professionals.

(II) Be based on a systematic collection and evaluation of client records and administrative and management information and recordkeeping.

(III) Identify and document needed changes in the provision of services and shall identify steps for implementing programmatic change, where indicated.

(5) Budget:

(A) Itemized budget.

(B) Allocation of shared personnel costs.

(C) Narrative description and justification of all budget items.

(c) The Program may provide program funds for health promotion and disease prevention services which best promote the purposes of the program. In making the determination of which applications to approve for funding, each proposal will be judged on its own merits in competition with all the other proposals submitted to the program. The application will have the best opportunity of success if the need for the activity has been carefully assessed and if the activity can be successfully completed in a reasonable period of time. Proposals will be judged according to the following criteria:

(1) Are the program objectives specific, measurable, and realistic?

(2) Do proposed activities follow a logical pattern to achieve the stated program objectives?

(3) Are the program objectives and intervention strategies based upon well-defined problems derived from baseline data and other available information?

(4) Does the request for program funds provide a clear understanding of whom the program will serve and who is responsible for various activities?

(5) Is there conformity and linkage with the program and other appropriate voluntary organizations, professional societies, etc. and are there plans to effectively utilize their resources?

(6) Will achievement of the program objectives result in new knowledge, techniques, and services that can be utilized by the State and community programs?

(7) Is the quality assurance plan adequate to monitor and control program outcomes, impacts, and processes?

(8) Other pertinent factors.

(d) Final decisions shall be made and communicated to applicants within 45 days of the deadline established for submission of applications for program funds.

(e) A contract shall be signed with each applicant who is approved for funding. The number and type of services to be provided under the contract will be negotiated annually with each contractor, approved by the program, and included as an addendum to the contract. Contracts may be renewed upon expiration of the contract period upon determination of a continuing need for services in the area served, contractor performance, and the availability of funds. Continuation applications must include completed performance reports as required by the program.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

.1006 MONITORING AND REPORTING PROGRAM PERFORMANCE

(a) The program shall develop, implement, and maintain monitoring and reporting program performance procedures designed to place reliance on contractors to plan, manage, and control the day-to-day operations of funded activities. Contractors shall implement and maintain the Adult Health Services Information System.

(b) Contractors shall monitor the quality and performance of all funded activities. Contractors shall establish, implement, and maintain a quality assurance program and review each activity, function, and service to assure that adequate progress is being made towards achieving negotiated project objectives.

(c) Applications for continuing support shall include a performance report which covers a reporting period designated by the program. The content of the performance report shall conform to instructions issued by the program including a brief presentation of the following for each activity, service, or negotiated objective:

(i) A comparison of actual accomplishments to the negotiated objectives established for the period. Where the output of the project or program can be readily expressed in numbers, a computation of cost per unit of output may be required if that information will be useful.

(ii) The reasons and justification for the difference between actual accomplishments and negotiated objectives if such objectives were not met.

(iii) Other pertinent information including, when appropriate, analysis and explanation of unexpectedly high overall or unit costs.

(d) The program may conduct site visits as necessary to:

(1) Review contractor program accomplishments and management, administrative, and fiscal control systems.

(2) Provide such technical assistance and consultation as may be required.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

.1007 USE OF PROGRAM FUNDS

(a) Program funds provided pursuant to these rules shall be expended solely for the purposes for which the funds were made available in accordance with the approved application, negotiated project objectives and budget, the rules in this section the terms and conditions of the award, and the applicable State costs principles.

(b) A contractor that consistently fails to meet acceptable levels of performance as determined through site visits, review of performance reports, data from the Adult Health Services Information System, and other appropriate and generally accepted performance standards and has been offered program consultation and technical assistance, may have program funds reduced or discontinued. Recommendations to reduce or discontinue funding must be reviewed and approved by the State Health Director.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

.1008 CLIENT AND THIRD PARTY FEES

(a) A contractor may impose fees for funded adult health promotion and disease prevention services. Such fees shall:

(1) be applied according to a plan approved by the local board of health and board of county commissioners or governing body as appropriate.

(2) not be imposed on persons unable to pay for services.

(3) be adjusted to reflect the income, resources, and family size of the person receiving the services.

(b) The contractor must make reasonable effort to collect fees from the client or third party payors. Fees charged and collected must be reported to the program and may be expended only with the prior written approval of the program and used only to reduce the program portion of the contract amount or to expand services according to an approved plan.

History Note: Statutory Authority G.S. 130A-223;
Eff. January 1, 1985.

APPENDIX E

TRENDS IN HEALTH CARE PROVIDERS

1. A Special Report on Health Care Resources in North Carolina: North Carolina Health Manpower Data Book, October 1984, has been prepared by and is available from the Health Services Research Center at the University of North Carolina at Chapel Hill, N.C. 27514. (Referenced but not included in DHR report and not included in Legislative Research Commission report.)

   This project was developed with support from 1) the N.C. Consortium on Health Care Data sponsored by the North Carolina Hospital Association with support from the Duke Endowment and 2) the North Carolina Area Health Education Centers Program.

2. Kapantais, Gloria, "Trends in Health Personnel," Health United States 1983. (Included in DHR report, referenced only in Legislative Research Commission report.)

APPENDIX F

IN-HOME CARE, NORTH CAROLINA

Contents

Adult Health Services Section
Health Care Branch
Home Health Services Program

I. Description of Program/Function

The Home Health Services Program (HHSP) was established in 1966 following Title XVIII and XII amendments to the Social Security Act. Several House Bills were passed following the establishment of the HHSP in 1966 in an effort to facilitate the growth of the Home Health Services Program, provide for licensure and certification of home health agencies for participation in Medicare and Medicaid Programs, establish Certificate of Need Law, and require that Home Health Services be available in all counties in the State (HB 870, 1249, 993, 931).

The mission of the HHSP is to ensure the provision of home health services throughout the State and provide access to home care for persons in need and unable to pay for services. Senate Resolution 13 and Senate Joint Resolution 61 represent the legal mandate for the HHSP. In July, 1979, this joint resolution was ratified endorsing in-home services to the aged as a viable and needed alternative to institutional care. The resolution led to the Division of Health Services receiving an appropriation of $1,445,097 to enable home health agencies to extend and expand their services and support care for persons not otherwise able to afford home health services.

Eligibility for coverage through HHSP is based on gross family income and family size as compared to Federal Poverty Guidelines. Those individuals whose gross family income is 125% or less of Federal Poverty Guidelines are eligible for 100% assistance through the HHSP and those between 125 and 200% of Federal Poverty Guidelines are eligible for assistance ranging from 25-85%.

II. Method of Funding Allocation

HHSP Reimbursement Funds are provided to the home health agencies for services they provide to eligible patients. These reimbursement funds are distributed to the home health agencies by contracts. Contracts for these funds are subject to annual renewal and are contingent upon availability of funds.

The HHSP allocates reimbursement funds according to community needs and performance record of the respective home health agencies. Therefore, in order to maximize utilization of these funds, in the event that an agency is being reimbursed at a rate that would suggest an under expenditure of funds at the end of contract period, the program has reduced the amount of funds budgeted by an amount consistent with the projected level of under expenditure. These funds have later been allocated as supplemental funds to those agencies providing more service.

Summary
Presentation to the Legislative Research Commission
on Preventive Medicine
Division of Health Services
Department of Human Resources
January 30, 1986

Cardiovascular disease, cancer and injuries are the major public health problems in North Carolina in both human and economic terms. These three leading causes of death accounted for approximately 285,000 premature years of life lost for North Carolina in 1984 alone.

Both the public and private sectors are seeking to respond to these problems. Well planned community based and worksite based health promotion and disease prevention programs and strategies have shown to be effective in modifying risk factors related to cardiovascular disease, cancer and injuries.

Within the public sector, a number of organizations within state government have assumed a role in health promotion and disease prevention. A number of these efforts are listed below; this is not an all inclusive list.

I. The Department of Human Resources works through several Divisions to prevent, whenever possible, sickness, emotional problems, disabilities and poverty and strengthen programs at the local level so people can be better served in their own home and communities.

A. The Division of Health Services' goal is to promote good health for the people of North Carolina by preventing health problems before they start or by intervening early while a health problem is easy to treat. Division of Health Services (DHS) provides a basis for the prevention of cardiovascular disease, cancer and injuries through health promotion and disease prevention programs. In the area of Adult Health, DHS Standards were adopted in 1984 stating that local health departments "shall establish, implement and maintain written policies for the provision of cancer, diabetes, and hypertension health education services to the community, persons at risk, and patients." General Aid to Counties funds are provided to local health departments to meet standards for all programs; some counties use these funds for prevention of cardiovascular disease, cancer and accidents.

B. Other Division of Health Services initiatives which have impact in the prevention of cardiovascular disease, cancer and injuries include:
   1. Adult Health Services Section
      - o In FY 85-86 the Risk Reduction Program funded 30 counties with small grants to local health departments to develop planned, community based health promotion interventions.
      - o The High Blood Pressure Program works primarily through local health departments to provide screening, education, referral and treatment for high blood pressure.
      - o The Renal Disease Prevention Program works through local health departments to reduce the incidence of kidney failure by controlling high blood pressure and diabetes.
      - o The Cancer Control Program is primarily a payment program working with hospitals to increase accessibility to treatment for low income cancer patients.

2. Laboratory Section
   - o The Cancer Cytology Service interprets the screening of cervical cancer tests ("pap" tests) from local health departments and other state supported institutions.
3. Epidemiology Section
   - o The Highway Safety Branch provides medical evaluation of drivers with mental or physical handicaps and conducts training, certification and supervision of all chemical tests for alcohol.
4. Maternal and Child Care Section
   - o The "SPRANS" Project ("Special Projects of Regional and National Significance") is a 3 year demonstration project working with local health departments to develop home injury prevention programs for children.

C. Other Department of Human Resources activities in prevention of cardiovascular disease, cancer and injuries occur with support from:

1. The Division of Medical Assistance has responsibility for the State's Medicaid Program which is a medical assistance program for the elderly, blind, disabled and families with dependent children. Some adult health screening programs are reimbursable under Medicaid and the Early, Periodic Screening, Diagnosis and Treatment Program.
2. The Division of Aging serves as an advocate for older North Carolinians, to improve their quality of life, to help them maintain their independence and dignity and to prevent unnecessary placement in institutions. Eighteen regional Area Agencies on Aging serve older citizens through senior centers, nutrition programs, information and referral, counseling, home-delivered meals, in-home services and transportation.
3. The Division of Mental Health/Mental Retardation and Substance Abuse Services provides aid to the mentally ill, mentally retarded and those with alcohol and drug problems through a system of state operated institutions and locally operated community programs. The Division has prevention program activities in the following areas: fetal alcohol syndrome; alcoholism; driving while intoxicated; acquired immune deficiency syndrome among intravenous drug abusers; drug abuse and prescription drug abuse.

II. Other Government Activities which may impact on the prevention of cardiovascular disease, cancer and accidents include:

A. North Carolina Department of Labor, Division of Occupational Safety and Health, administers workplace safety and health rules in North Carolina. The Division consists of four bureaus, three of which provide assistance to employers and employees in identifying hazards and minimizing their impact on worker safety and health.

B. The Department of Public Instruction mandates school health education in K-8 and for one year between grades 9-12; has operational programs with 46 school units; and a staff of 36 school health coordinators. The Driver's Education Program is a mandated requirement for a driver's license for those under 18 years of age, and is available to all young persons aged 14-1/2 to 18. Courses include mandatory components related to the safe operation of an automobile including a component on drugs and alcohol and one on use of safety belts.

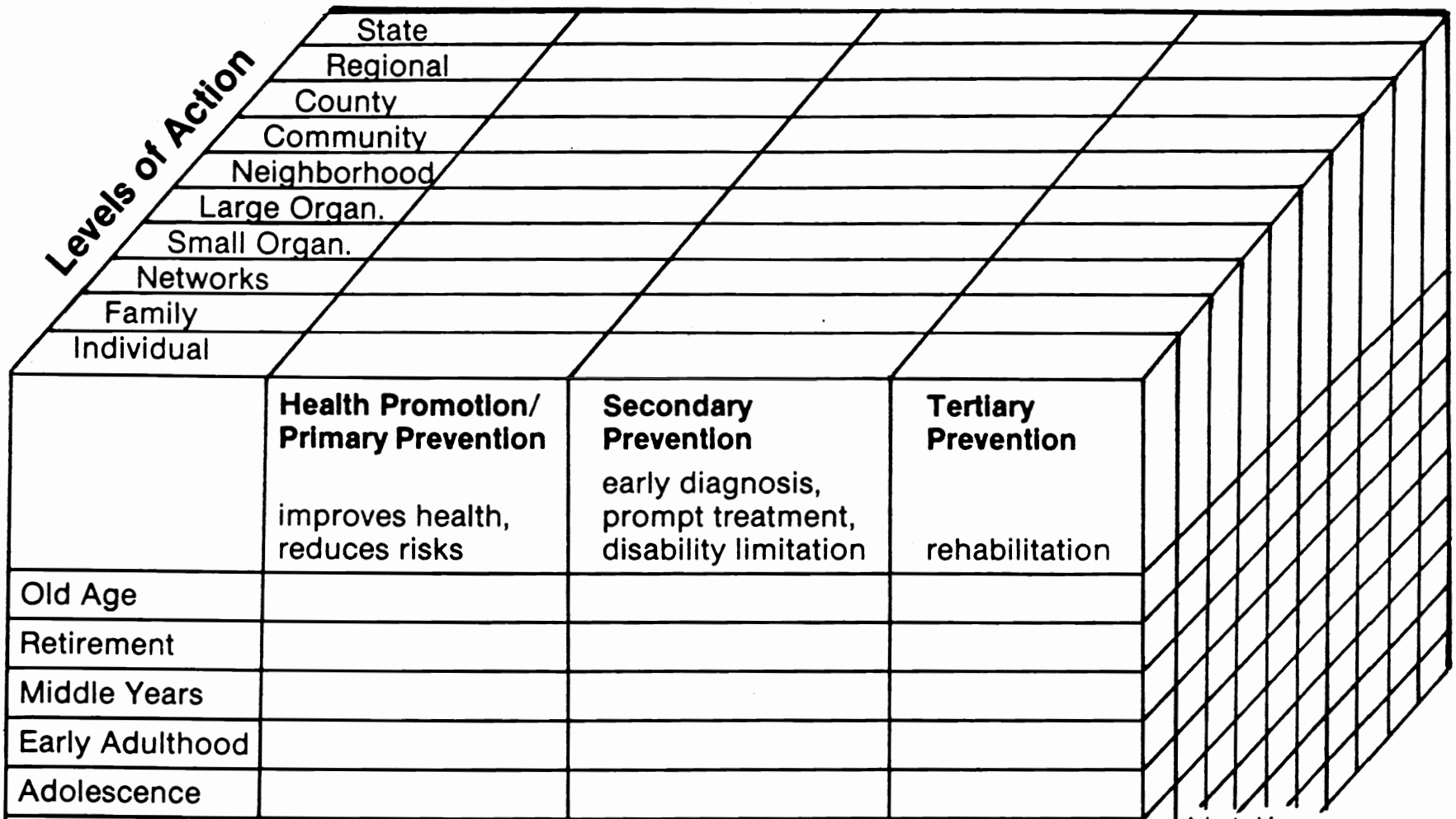
C. The Agricultural Extension Program in North Carolina is administered through North Carolina State University and the North Carolina Agricultural and Technical University. It works through 101 county offices to provide food and nutrition services and education based on the Department of Health and Human Services' "Dietary Guidelines for America". Their 1983-1987 program is entitled "Eat Right for Life".

D. The Governor's Highway Safety Program works to solve identifiable highway safety problems including driving while intoxicated (DWI), driving over the speed limit, and non-use of seatbelts. The Governor's Seatbelt Education Task Force, authorized by the Governor's Highway Safety Program to coordinate seatbelt education campaigns and information dissemination throughout the state.

E. The Governor's Council on Physical Fitness seeks to encourage physical fitness in North Carolina by maintaining liaisons with government, private and other agencies, recognizing outstanding developments and making recommendations to the Governor.

F. An Executive Order to create a health promotion for state employees called Wellness Improvement for State Employees (WISE).

A Strategic Framework for Public Health



Stages in Life-Cycle	**Health Promotion/ Primary Prevention** improves health, reduces risks	**Secondary Prevention** early diagnosis, prompt treatment, disability limitation	**Tertiary Prevention** rehabilitation
Old Age			
Retirement			
Middle Years			
Early Adulthood			
Adolescence			
Childhood			
Toddler			
Post-Natal			
Ante-Natal			

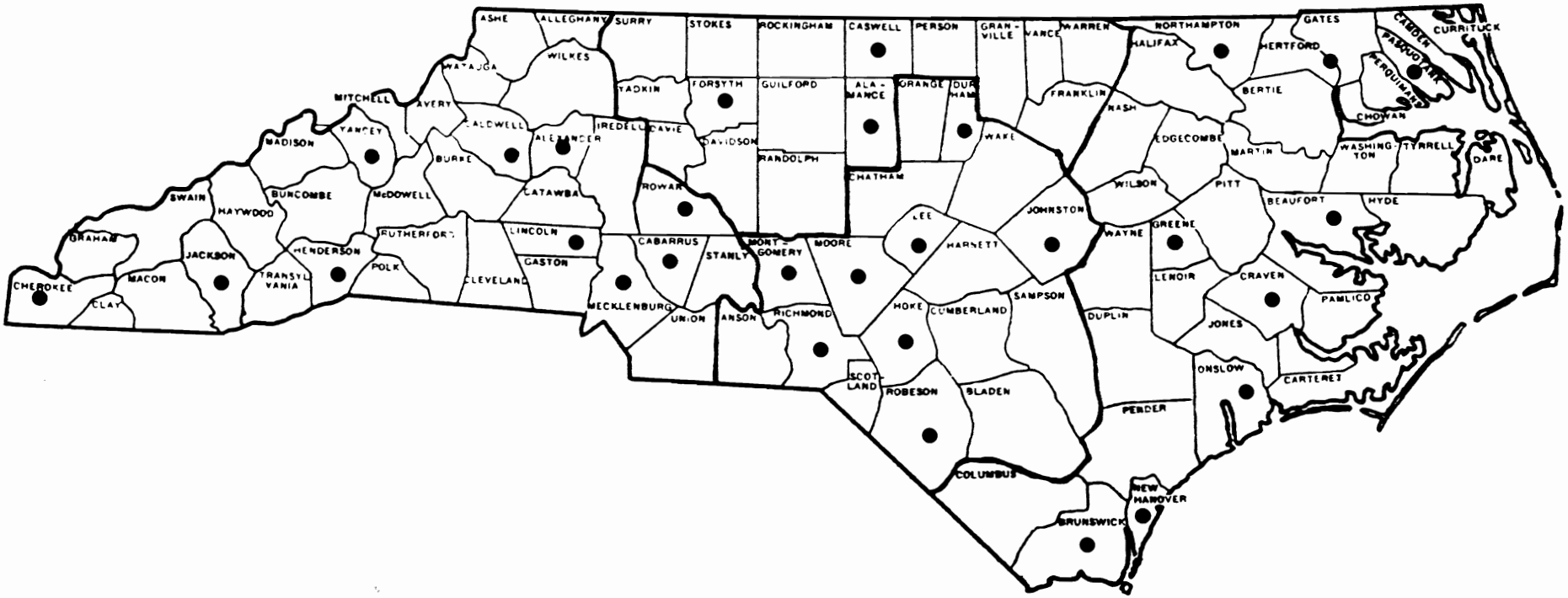
Types of Prevention

Adapted from: *"A Conceptual Framework for Health Education"* by Tom Milroy (unpublished); and Leavell, H.R. and Clark, E.G. (Editors), **Preventive Medicine for the Doctor in His Community**, Toronto, 1965.

RISK REDUCTION PROJECTS, ADULT HEALTH SERVICES SECTION

DIVISION OF HEALTH SERVICES

DEPARTMENT OF HUMAN RESOURCES



PRESENTATION TO LEGISLATIVE RESEARCH COMMISSION

ON PREVENTIVE MEDICINE

JANUARY 30, 1986

DR. GEORJEAN STOODT

DIVISION OF HEALTH SERVICES

Department of Human Resources' Secretary Phillip Kirk believes that "Prevention of problems should be the foremost priority of human service delivery programs." During the past year, he has demonstrated a strong commitment to prevention programs that directly affect the health and well-being of our people.

Areas where Secretary Kirk has placed emphasis include:

- Prevention of premature and low-birth weight babies;
- Prevention of childhood injuries and disabilities;
- Prevention of mental retardation;
- Prevention of illness among our older adults;
- Prevention of family violence which affects both the physical and mental health of family members and includes the abuse and neglect of children, adults and the elderly;
- Prevention of substance abuse, especially among youth.

Secretary Kirk frequently talks about the importance of health promotion, of helping people to help themselves by promoting preventive programs and a healthy lifestyle. Prevention is cost-effective, especially if we view the long-term effectiveness and include not only the element of cost savings but also the avoidance of personal pain and suffering which often last a lifetime.

Since this Legislative Research Commission set to work, you have heard a great deal about the high costs we pay in North Carolina - both in human terms and in economic terms - for our three leading causes of death: cardiovascular disease, cancer and injuries. Many of these premature years of life lost in North Carolinians are preventable.

I would like to explain "A Stragegic Framework for Public Health Services" which may help shed some light on the scope of today's public health services and the potential and challenges ahead. Description of the model. Accenting health promotion at the neighborhood, community, county levels as key to the future of public health's attack on CVD, CA and injuries.

Both the public and private sectors are seeking to respond to these health problems. Well planned community based and worksite based health promotion and disease prevention programs and strategies have been shown to be effective in modifying risk factors related to cardiovascular disease, cancer and injuries.

A number of organizations within state government have assumed a role in health promotion and disease prevention. Some agencies have programs that are aimed specifically at risk factors related to these leading causes of death. My task today is to describe to you these public sector activities, both old and new.

1. The Department of Human Resources works through several divisions to prevent, whenever possible, sickness, emotional proglems, disabilities and poverty and to strengthen programs at the local level so people can be better served in their own homes and communities.

DIVISION OF HEALTH SERVICES

The primary focus of the Division of Health Services is to protect, promote and preserve the health of the citizens of North Carolina.

There is a basis for the prevention of cardiovascular disease, cancer and injuries through health promotion and disease prevention programs. In the area of adult health, DHS standards were adopted in 1984 stating that local health departments "shall establish, implement and maintain written policies for the provision of cancer, diabetes, and hypertension health education services to the community, persons at risk, and patients." General aid to counties funds are provided to local health departments to meet standards for all programs; some counties use these funds for prevention of cardiovascular disease, cancer and accidents. However, many services are supported by these funds, including:

Child Health

Maternal Health

Family Planning

Dental Public Health

Home Health

Adult Health

Individual (on-site) Water Supply

Sanitary Sewage Collection, Treatment and Disposal

Grade "A" Milk Sanitation

Food, Lodging, and Institutional Sanitation

Communicable Disease Control (Including General Communicable Disease Control, Tuberculosis Control, Immunization, and Veneral Disease Control)

Vital Records

Laboratory

In 1984-85, approximately $4,650,000 was expended by local health departments through general aid to counties.

Other Division of Health Services initiatives which have impact on cardiovascular disease, cancer and injuries include:

1. Adult Health Services Section

   A. In 1984-85 $1,639,741.00 of the Adult Health Fund was expended by local health departments to provide a variety of services including screening and follow-up for cancer, diabetes and glaucoma, adult health screening and primary care.

   B. In FY 84-85 the Risk Reduction Program funded 15 grants to local health departments to develop planned, community based health promotion interventions. $134,787.00 were expended on these prevention programs. In FY 85-86, $332,884 is budgeted for 30 county programs. Of these 30 Risk Reduction projects, half are currently in developmental stages. This includes conducting needs assessments, building networks with other agencies, developing community resource inventories, determining priorities and developing plans of action. Several counties have developed health promotion advisory groups to help plan and coordinate efforts. The remainder have passed through the planning stage and are carrying out specific interventions. Eight projects focus on health promotion in the worksetting. Other targets include high risk populations for cardiovascular disease, injuries and cancer.

   C. In FY 84-85 the High Blood Pressure Program funded 33 local health departments to provide screening, education, referral and treatment for high blood pressure. During that year $605,798.00 were expended in this program. It is estimated that <u>approximately</u> 20% of these dollars were spent on activities related to the <u>primary</u> prevention of cardiovascular disease, the remainder is a secondary prevention activity.

D. The Renal Disease Prevention Program works through local health departments to reduce the incidence of kidney disease by controlling high blood pressure and diabetes. In FY 84-85 $72,405.00 were expended on 10 projects in this preventive program.

E. The Cancer Control Program is primarily a payment program working with hospitals and physicians to increase accessibility to treatment for low income cancer patients. It also provides for diagnostic clinics for high risk populations. In FY 84-85 $935,000 was expended in this program.

2. Maternal and Child Care Section

A. Nutrition Branch provides nutrition counselling through local health departments for income eligible populations. This counseling targets, amont others, those with the chronic conditions of cardiovascular disease and cancer. An estimated $100,000 were expended in FY 84-85.

B. The "SPRANS" project ("Special Projects of Regional and National Significance") is a 3 year demonstration project working with local health departments to develop home injury prevention programs for children. This project will be initiated in FY 85-86.

C. The Family Planning Program estimates that $199,000.00 were spent locally for cervical cancer screening and $143,000.00 were spent for cervical cancer follow-up during FY 84-85.

D The Children's Special Health Services, formerly the Crippled Children's Program, provides funds for the diagnosis and treatment of children who are financially eligible for the program and meet other program criteria. In FY 84-85 this program expended $788,000.00 for treatment of cardiovascular disease, $744,000.00 for cancer treatment and $400,000.00 for treatment related to accidents.

3. Laboratory Section

Cancer cytology services interpret the screening of cervical cancer tests ("Pap" tests) from local health departments and other state supported institutions. Estimated expenditures for FY 84-85 were $715,000.

4. Epidemiology Section

The Highway Safety Branch provides medical evaluation of drivers with mental or physical handicaps and conducts training, certification and supervision of all chemical tests of alcohol. The expenditures for this program were approximately $553,000.

C. Other Department of Human Resources activities in prevention of cardiovascular disease, cancer, injuries and other health and social problems include.

1. The Division of Medical Assistance

A new preventive initiative for North Carolina's Medicaid Program recently dedicated $5 million for adult (21 years old plus) health screening.

The Early Periodic Screening Diagnosis and Treatment Program (EPSDT) concentrates on the young population, ages 0 through 20.

2. The Division of Aging serves as an advocate for older North Carolinians, to improve their quality of life, to help them maintain their independence and dignity and to prevent unnecessary placement in institutions. Eighteeen regional area agencies on aging serve older citizens through senior centers, nutrition programs, information and referral, counseling, home-delivered meals, in-home services and transportation. The Division has called health promotion "Their Theme for 1986" and at both the state and local levels have called on the public health system to carry out their efforts.

3. The Division of Mental Health/Mental Retardation and Substance Abuse Services provides aid to the mentally ill, mentally retarded and those with alcohol and drug problems through a system of state operated institutions and locally operated community programs. The division has prevention program activities in the following areas: fetal alcohol syndrome; alcoholism; driving while intoxicated; acquired immune deficiency syndrome among intravenous drug abusers; drug abuse and prescription drug abuse.

4. The Governor's Coucil on Physical Fitness seeks to encourage physical fitness in North Carolina by maintaining liaisons with government, private and other agencies, recognizing outstanding developments and making recommendations to the Governor.

II. Other government activities which may impact on the prevention of cardiovascular disease, cancer and accidents include:

A. North Carolina Department of Labor, Division of Occupational Safety and Health which administers workplace safety and health rules in North Carolina. The division consists of four bureaus, three of which provide assistance to employers and employees in identifying hazards and minimizing their impact on worker safety and health. These include programs entitled "The Hazardous Chemicals Right to Know Act" and "The Hazardous Chemical Notice, more commonly referred to as Worker and Community Right-to-know which assure workers and community members access to information about chemicals in the workplace and community.

B. Department of Public Instruction

1. School Health Education

The Department of Public Instruction mandates school health education in K-8 and for one year between Grades 9-12; has operational programs with 46 school units; and a staff of 36 school health coordinators. These coordinator positions cost about $32,000 each, for an approximate total of $1,152,000.

2. Driver's Education

The Driver's Education Program is a mandated requirement for obtaining a driver's license for those under 18 years of age, and is available to all young persons aged 14-1/2 to 18. Courses include mandatory components related to the safe operation of an automobile, including a component on drugs and alcohol and one on use of safety belts.

C. The Agricultural Extension Program in North Carolina is administered through North Carolina State University and the North Carolina Agricultural and Technical University. It works through 101 local offices (all 100 counties plus an indian reservation) to provide food and nutrition services and education based on the Department of Health and Human Services' "Dietary Guidelines for America". Their 1983-1987 program is entitled "Eat Right for Life".

D. The Governor's Highway Safety Program works to solve identifiable highway safety problems including driving while intoxicated (DWI), driving over the speed limit, and non-use of seatbelts. The Governor's Seatbelt Education Task Force, authorized by the Governor's Highway Safety Program to Coordinate Seatbelt Education Campaigns and information dissemination throughout the state.

E. In May, 1985 the Governor signed an Executive Order to create a Health Promotion Program for State Employees called WISE which stands for Wellness Improvement for State Employees.

IN SUMMARY,

- 0 There is significant involvement in health promotion/disease prevention within state government.
- 0 A large portion of these initiatives are in the Department of Human Resources.
- 0 With regard to programs affecting the 3 leading causing of death, primary responsibility lies in the Division of Health Services.
- 0 The Adult Health Services Section administers 30 community based health promotion/disease prevention projects through local health departments. These target cardiovascular disease, cancer, and injuries.
- 0 The dominant mechanism for these efforts is one that is:

  Centrally administered

  Centrally financed and

  Locally operated partnership

  Whose goal is to best meet

  The health needs of the

  People) living and working

  In our communities.

In closing,

North Carolina's public health system has always been a national leader, but we have new challenges ahead. These are exciting challenges because there are viable solutions. Lets work together to reduce these premature deaths, and make 65 years a "young age" for North Carolinians.

SUMMARY OUTLINE

Legislative Research Commission's Study of Preventative Medicine

North Carolina Health Systems Agencies

I. Brief citations of current health promotion/disease prevention activities in local organizations and agencies:

- Hospitals
- Voluntary Agencies
- Business/Industry
- Churches
- Local Civic Groups
- Private Entrepreneurs
- Community Colleges
- Rural Health Centers and Community Health Centers

II. Recommendations of ways in which the Study Commission can act to support health promotion/disease prevention programs:

- Financial encouragement to Cardiac Rehabilitation Centers to expand services to address preventive health care needs of medically high risk population groups. Preventive services would be provided to specified groups to decrease the risk of future major medical problems.
- Provide a State tax advantage for employers who provide prevention and health promotion services to employees.
- Accelerate funding efforts to establish new school district health education coordinator positions. These positions (presently 40) help assure a comprehensive health education program to primary and secondary students. The overall objectives of the program are to raise the level of health awareness and knowledge, to enhance the quality of life, and to influence the development of health habits.
- Encourage creative use of existing statewide systems (schools, community colleges) for the dissemination of health information and health programming.
- Provide incentives for local state supported agencies to coordinate health promotion/disease prevention efforts.

III. Development of guidelines for allocation of health promotion/disease prevention funds.

SUMMARY

Presentation to the Legislative Research Commission
on Preventive Medicine

North Carolina Health Systems Agencies

January 30, 1986

The concept of health promotion and disease prevention has received increasing attention and emphasis in the last decade. These health promotion/disease prevention efforts are an innovative approach at trying to decrease the number of lives lost due to "lifestyle" diseases (heart disease, stroke, cancer) in a prospective manner. In other words, health promotion and disease prevention shifts the attention from crisis oriented sick care to well care. It attempts to foster the development of healthy lifestyles and behavior to maintain and enhance the state of well-being.

As our understanding deepens about the influence that personal behavior and lifestyle patterns can have on our health status, a significant public and private health promotion effort is developing to help persons in North Carolina achieve greater gains in the maintenance and improvement of their health. These efforts generally attempt to educate the public about the rewards of adopting positive lifestyle behaviors, as well as advocating a change in the physical and social environment to support these lifestyle choices.

The impetus for health promotion is stronger today than ever before. Individuals, community groups, health care settings, schools, business and industry are moving towards a new perspective on health. The many trends, forces and attitudes changing our concepts of health and health care have combined to make the promotion of health and the prevention of disease the best choice for further improvement in the overall health of the American people.

There are many actors in the field of health promotion and disease prevention, including public and private initiatives. Below is a partial listing of current ongoing programs in local organizations and agencies.

I. Hospitals - According to the American Hospital Association, "Hospitals have a responsibility to take a leadership role in helping to ensure the good health of their communities." This policy is quickly becoming practice as hospitals throughout the state and the nation develop health promotion programs.

While hospital wellness programs vary widely in activities and approaches, they share several common features. Most hospital-based programs are offered to anyone within range of their facilities. Generally, the programs start with hospital employees, extend to community residents and then reach out to specific target groups, such as business, industry or professional organizations. Funding for the programs is obtained from third-party reimbursement; fee-for-service payments; donations from consumers; gifts, grants and contracts and the extensive use of volunteers.

The primary goal of hospital wellness programs is to help people in the community maintain optimal health. In addition, hospitals gain good public relations, improve health of hospital employees, expand sources of revenue (particularly from the sale of package programs to industry) and satisfy their commitment to promoting public health.

A. **Rex Hospital** in Raleigh established a Wellness Center in 1984 to "provide information and services to help individuals and families reach a healthy lifestyle to prevent unnecessary illness." The Rex Hospital Wellness Center offers physician approved programs designed and presented by qualified health care professionals. Current programs include Aerobics (beg. and advanced), Stress Management, Weight Reduction, Culinary Hearts Kitchen, individual nutrition counseling, Back Injury Prevention, Cardiopulmonary Resuscitation (CPR), Health Risk and Lifestyle, and Smoking Cessation.

Regularly scheduled classes are open to the public, special programs can be provided to organizations, groups, business and industry.

B. **Presbyterian Hospital** in Charlotte initiated its own "HealthPlus" program for hospital employees in 1984. HealthPlus offers participants health screening and fitness profiles, interpretation of results and a selection of self-help and instructor-led courses in Exercise, Stress Management, Weight Loss, Smoking Cessation and Nutrition. In addition the hospital recently expanded its program to include other employer groups in the area. It is also beginning to offer occupational health consultation to industry, and has began producing audio-visual films for patient education and staff development.

C. **Cape Fear Valley Medical Center** in Fayetteville initiated a Community Care program in 1985. Community Care provides health care programs and coordinates support groups for hospital employees and community residents in the area. (heart health, diabetes support group, weight control class, stroke victim support group, childbirth education class, smoking cessation class, arthritis support group) Community

Care also coordinates a mall walk to increase fellowship and fitness in the community.

D. **Charlotte Institute for Health Promotion** (unit of Charlotte Mecklenburg Hospital Authority) has been in operation for two years. The Institute interacts with the field of health promotion in 3 ways. The first is their work with employee groups. In addition to offering health assessment, education and fitness facilities to employees of Charlotte Memorial and the Rehabilitation Hospital, the Institute provides diagnosis and assessment, consultation, strategic health planning, and development of health promotion services to area business and industry groups. The second area of their involvement in health promotion is with the educational system. The Institute is active in primary and secondary teacher education, and the development of college health promotion programs. The third area of activity for the Institute is their involvement with the medical sector. The Institute is involved with health promotion research projects, it has a Cardiac Rehabilitation Center within the program, and is branching out services to reach high risk health groups.

II. Voluntary Agencies - Voluntary agencies in our communities have a long history in health promotion and disease prevention. As the field has developed over the past decade, many of the agencies have narrowed their prevention program's focus into specific risk factor areas (i.e., smoking, hypertension, nutrition, etc.) to better utilize their resources and reach their target populations.

A. Since 1949, the **North Carolina Affiliate of the American Heart Association** has offered programs for the public and medical profession to inform and educate as to the cause, symptoms, and methods of prevention of cardiovascular disease. The educational program of the American Heart Association has recently chosen 3 priority areas for program development and implementation for their three year plan; nutrition, hypertension, and smoking. These areas were selected because successful programming efforts would have the most significant impact on preventing premature death and disability from cardiovascular diseases.

The educational program of the American Heart Association is a dynamic effort to get people to change their behavior in relation to risks which increase the chances of developing cardiovascular diseases, and to accept responsibility for applying the knowledge they receive.

The American Heart Association programs will concentrate expansion efforts in 3 locations; worksites, schools, and health care sites.

B. The **American Cancer Society, Inc.** is a national voluntary health organization of 2.5 million Americans united to conquer cancer through balanced programs of research, education, patient service and rehabilitation. Public education plays a vital part in the Society's goal of saving more lives through early detection and prompt treatment. North Carolinians learn ways to protect themselves against cancer by attending cancer education programs conducted in their workplace, clubs, organizations, neighborhoods, and schools.

This year the American Cancer Society has launched a three-year Colorectal Health Check Program (CHECK). Designed as a public education program efforts are to increase the knowledge of this cancer and increase the number of adults having their stools tested. The program hopes to reach 30% of all adults over the age of 50 in N.C.

The American Cancer Society is also striving to make cancer education an important part of a student's education. This is being accomplished primarily through the use of teaching kits, films, and pamphlets designed to introduce students to healthy habits and personal behavior as it relates to cancer. A new kit, Health Myself has been added this year to the 7-9 grades to enhance the study of cancer.

Many efforts have been made to open doors to major businesses with cancer education. With these adults, Society volunteers help employees change unhealthy habits; for example, the Society's Fresh Start smoking cessation program helps smokers quit and stay off cigarettes. Along with helping people break unhealthy habits, the American Cancer Society offers programs to encourage people to adopt positive health habits. These programs emphasize the importance of early detection of cancer through such methods as breast self-exam, stool blood tests, the pap test for uterine cancer and regular health checkups.

C. The **American Red Cross** has been involved with health education programs for a number of years. Programs are designed for the general population to increase their knowledge of health and encourage new behavior for personal health practices.

Red Cross units offer health education courses through their Healthy Lifestyle Series, which includes courses in CPR, Nutrition, High Blood Pressure, Personal Health Care, and Health Risk Assessment.

In recent years, the American Red Cross has begun to target worksites and the black community in their health promotion efforts.

D. The prevention and control of lung disease is the central goal of the **American Lung Association of North Carolina.** The focus of the Lung Association's preventative efforts is smoking cessation and increased awareness about smoking and premature death and disability. Their program - Freedom From Smoking provides a variety of dissemination techniques on smoking cessation, such as self-help material, video tape (13 part) program, smoking cessation clinic, support groups, educational information to pregnant women, and information and assistance to corporations regarding smoking policies.

The Lung Association also makes presentations to schools, churches, civic organizations about smoking and health.

III. Business & Industry - The rising movement of health promotion/disease prevention in the United States and North Carolina is perhaps nowhere more evident than in the workplace. Business, which pays nearly half the nation's rapidly inflating health care bill, has become increasingly concerned about the "health" of its work force. Unlike the traditional health insurance and medical services provided by employers, the recent health promotion programs are motivated by the assumption, and an increasing amount of supportive data, that prevention will be less costly to employers than relying solely on curative medicine. In addition, it is felt that healthy employees curb excessive absenteeism, lower the rate of employee turnover, decrease accidents and workers compensation claims, and increase productivity.

More and more businesses are offering programs and services designed to promote the health of their employees and to reduce health risks.

A. **Burlington Industries** began a pilot study in 1980 to research the feasibility and cost-effectiveness of health promotion services provided to employees. Based largely on improvements in absenteeism data and health care claims the program has been judged successful. Additionally, the study found qualitative improvements such as increased morale, well-being, and positive feelings towards management.

The program strategy is threefold. First an employee gos through a multi-phasic screening process and health risk profile for Risk Identification. Second is counseling regarding risk management. Third are the intervention programs to assist employees with risk management (diet and nutrition, fitness, stress management, smoking cessation, healthy back care).

Presently 5 Burlington plants in North Carolina have the entire program, and 8 other plants have part of the program.

Burlington Industries is currently beginning another pilot program to study the feasibility and cost-effectiveness of expanding the program to families of employees.

B. The **SAS Institute Inc.**, was presented the 1984 Governor's Award for Fitness and Health in Business and Industry. The computer software developer started a health promotion program at the request of its 522 employees. The program is designed to reduce everyday stress through year round clinics and courses encouraging good health practices.

C. The 1983 Governor's Award went to **IBM Corporation's** Research Triangle Park site. Designed at the corporate level, IBM's fitness and health program addresses four major health problems experienced by the company's 9,000 employees: stress and anxiety, musculo-skeletal problems, cardiac disease and hypertension. IBM pays the cost of health education programs and the voluntary health screening program for each employee.

D. Another channel for business and industry involvement in health promotion is through Business Groups on Health, Health Care Cost Coalitions and Business Wellness Councils. The **Wellness Council of Greensboro** was formed to promote wellness programs at the worksite (50 employer members). The main purpose of the Council is to (1) Gain the active support of the chief executive officers in the business community regarding the importance of health promotion at the worksite; (2) Provide health information and related resources to members of the business community regarding worksite wellness programs; (3) Act as an advisory body to individual businesses in matters relating to their worksite wellness endeavors; and (4) Promote good health practices throughout the community by involving employers, employees and their families in on-going wellness activities.

IV. Community Health Centers & Medical Centers - North Carolina's Community Health Centers (CHCs) and Medical Centers provide basic medical care to a population group that is generally disadvantaged in medical and health care services. To respond to the ever present demand for care, many of the centers have begun health promotion and disease prevention programs. These efforts, although just in the primary stages are demonstrating the significance of prevention. A large percentage of CHCs and Medical Center's patients have chronic health problems (overweight, diabetic and hypertensive). Rather than treat the problems exclusively with medication, the programs are beginning to address the issue of lifestyle and behavior.

V. Churches - Using the church community as a point of intervention for health promotion/disease prevention strategies is based upon the historical role of the church as advocate,

encourager, and enabler of action. Because the church often plays multiple roles for its members, it has been seen as a natural leader to help parishioners build healthier lifestyles.

A. The Seven-Day Adventist Church has been involved with formalized health promotion courses for many years. Church headquarters provides training for pastors and church volunteers so they are able to offer courses in their communities. The courses have a community orientation, rather than towards church members. Often the church provides courses and presentations with co-sponsorship from other community groups and agencies.

Health promotion courses generally offered are the Breathe Free Program (smoking cessation), New Style -Home Style (nutrition education and vegetarian diet), Weight Management, Fitness, and Stress Management.

B. The **Fitness Through Churches** project is a research project focused on lifestyle changes. This project involves black North Carolinians in a risk reduction and education awareness campaign against cardiovascular disease. The focus of the project is cardiovascular education and aerobic exercise. The education component of the project provides information on heart-healthy nutrition, smoking and health, weight control, and blood pressure screening. The exercise component provides a regular form of exercise set to music designed to increase cardiovascular fitness.

Fitness Through Churches project leaders believe that the church can affect the problem of cardiovascular disease by making good health practices a priority for its congregation and the community it serves.

C. **The General Baptist State Convention** initiated a health promotion program in 1981. The program concept was to target natural advice givers within the church community and to provide training to expand their roles into the health arena. The goal of the program is "to improve and maintain better health for its members and for those to whom they provide support."

Initially, the program focused its attention on trying to educate members of the Convention on three major health problems affecting black citizens (hypertension, diabetes, and maternal and child health). Under a new grant (Kellogg Foundation), the program will shift its focus from a disease orientation to one of health promotion and will emphasize nutrition education, weight management, smoking cessation, and stress management.

INCREASE HEALTH EDUCATION COORDINATOR POSITIONS

PROPOSAL: Appropriate funds to the State Board of Education to provide additional Health Education Coordinators.

PURPOSE: The purpose of Health Education Coordinators is to provide public school students in North Carolina with a health education program capable of enhancing the quality of life, raising the level of health, and favorably influencing the learning process.

BACKGROUND: In 1973, the Auxiliary to the North Carolina Medical Society conducted a statewide survey to ascertain how many students received instruction in certain areas of health education. The president of the Auxiliary summarized the results of the survey by saying, "Standards of health education vary from system to system; and in too many systems health education is unplanned, fragmented, and based on invalid and obsolete information." The Ninth Grade Assessment of Educational Progress conducted in 1975-76 corroborated this finding: Our ninth grade students were in the "bottom fourth", compared to national averages, in their performance on the AAHPER Cooperative Health Education Test.

Based on these findings and additional concerns regarding health education in schools, the State Superintendent initiated a committee composed of representatives from the N. C. Medical Society, N. C. Medical Society Auxiliary, and the Department of Public Instruction to suggest improvements. The committee developed a ten-year plan to improve health education across the state, House Bill 540 (S.745) was written as a summary of this plan. H.B. 540 was endorsed by more than twenty major health related organizations, agencies, and institutions in the State.

The major emphasis of the ten-year plan was to establish health education coordinator positions within school districts (approximately 1 per county) to oversee and assure a comprehensive health education program for North Carolina students.

- June 1978 - The General Assembly ratified H.B. 540. Funds were provided for 8 local programs, a health education consultant position in the Department of Public Instruction, State Advisory Committee, and funds to begin the development of a comprehensive health education curriculum.

- June 1979 - General Assembly provided funds for 8 more school health education coordinator positions.

. July 1984 - 16 additional coordinator positions were funded.

. June 1985 - funds were provided for 4 more coordinators.

SPECIFICATION: At the present, there are 36 Health Education Coordinator positions. These positions assist teachers with health education programs, materials, and projects; they provide current information and in-service training; they involve health professionals within the community; and they work with the PTA and school administrators to promote healthy lifestyles. These individuals fill a great need in providing information and in increasing awareness about health and lifestyle of teachers, students, and parents in North Carolina.

A. Program Objectives

. Restructuring the health curriculum and introducing resource materials so that students will be able to establish healthy lifestyles, make decisions, and deal with life situations without taking undue risks with their health.

. Training teachers and other appropriate school and community members in the use of contemporary health education methods and materials so that students will be better prepared to lead healthy, satisfying, and productive lives.

. Organizing and coordinating the use of all community resources in health education for the greatest advantage to students.

. Planning and organizing a comprehensive, sequential program of health education in every school.

B. Program Outcomes

. Helping students to accept responsibility for their own health.

. Improving students' ability to make and implement health related decisions consistent with their needs.

. Helping students to become aware of the positive and negative determinants of individual health status, including the social, environmental, psychological, and genetic factors, and including personal lifestyles.

. Improving students' understanding of the relationships between health status and the major needs, sources of stress, and developmental characteristics of people

throughout the human life cycle.

- Enabling students to develop healthy lifestyles and to deal with life situations without taking unnecessary risks with their health.

Although great progress has been made toward fulfilling the General Assembly's commitment to provide a comprehensive health education program to North Carolina's students, there are still many school districts (counties) which do not have a health education coordinator to provide guidance and assistance in health education efforts.

Advancement of some health objectives can be attained through appropriate school health services; healthy school environment and physical education programs. The great majority, however, needs to be incorporated in the school curricula; topics of health and behavior need to be presented in an organized sequence throughout the school years in education programs that address personal health, mental and emotional health, prevention and control of disease, nutrition, community health, consumer health, environmental health and family life education.

Health Education is frequently overlooked as an important or relevant topic for school-aged audiences. On the contrary, learning to assume responsibility for one's own health should be taught as early as possible to prevent the development of poor health habits later in life. An expected outcome of teaching healthy habits in the formative years is an improved health status for all North Carolina citizens.

ENCOURAGE USE OF COMMUNITY AND TECHNICAL COLLEGES FOR HEALTH PROMOTION ACTIVITIES

PROPOSAL: Appropriate funds to the Department of Community Colleges to provide a health promotion coordinator.

PURPOSE: To assure regular statewide availability (at modest cost) of health promotion, disease prevention, and self care education courses to community residents and to business and industry employee groups.

BACKGROUND: Health promotion/disease prevention and self care activities are perceived as a means to achieve both an enhanced quality of life and reduced health care costs.

Increasing awareness, providing information, and raising motivation has been shown to lower the occurrence of disease and disability and to help individuals manage their chronic conditions with less reliance on medical care. Educational services that deal with problems of hypertension, stress, overweight and low back pain have been particularly effective in adult populations.

Demand for informational and motivational services aimed at preventing illness and promoting health has grown rapidly in the last decade. Part of this growth is due to the increased awareness within the population regarding health and the health effects of lifestyle. Additional incentive for this growth is economic. Our nation's health care costs has consistently outpaced inflation. High rates of illness, absenteeism, disability, early retirement and premature death are costly consequences of poor health habits.

The demand for these services has been met in several ways. Proprietary enterprises such as health spas, diet centers, stress clinics, etc., have developed. Voluntary health organizations have begun offering a range of prevention-oriented services. Business and industry have begun providing employee health promotion programs by hiring trained professionals and/or by utilizing community resources. Public health agencies have responded by helping develop and coordinate community programs. Hospitals are also beginning to offer educational courses and consultation services.

For the most part, however, existing services have been focused on white collar, urban area residents and employees of large firms. The small businesses and industries in rural areas have not had the same opportunity to access services. In addition, hourly (blue collar) employees have often been left out of health promotion services, or have not had the same amount of attention focused upon them.

The Community College System can be a very appropriate organizational instrument for delivering health promotion and disease prevention education statewide. The system has wide accessibility (54 institutions and additional satellites), modest user fees, professionals in the fields of health and education, legitimacy within the community, and cooperative relationships with local business and industry. The system already provides a variety of educational services to rural and hourly paid residents. Therefore it is well situated to deliver health promoting education services broadly in the State. The Department of Community Colleges has made a beginning effort in this direction, but lacks sufficient resources to have the desired output.

SPECIFICATION: In order to carry out the task of developing and implementing a coordinated effort of providing health promotion courses throughout the Community College System, an individual responsible for this project at the state level will be necessary.

The position of health promotion coordinator would provide technical assistance to individual colleges, monitor program design and implementation, and provide guidance regarding marketing services to employers and special target groups.

EXPAND SERVICES OF CARDIAC REHABILITATION CENTERS

PROPOSAL: Appropriate funds for a pilot study to determine the effectiveness of providing secondary prevention services to individuals in medical high risk population groups in Cardiac Rehabilitation Centers.

PURPOSE: Preventive services would be provided to specified groups to decrease the risk of future major medical problems.

BACKGROUND: In 1973, the North Carolina Division of Vocational Rehabilitation Services (DVRS) made a substantial commitment to develop a network of comprehensive cardiac rehabilitation services for the people of the state. DVRS infused $532,000 of Federal Innovation and Expansion Grant money into the development of inpatient cardiac rehabilitation programs in community hospitals throughout the state. Seeing the need to provide rehabilitation services for persons with cardiac conditions who have left a hospital, DVRS allocated an additional $574,992 of Innovation and Expansion Grants to develop outpatient cardiac rehabilitation programs. Outpatient cardiac rehabilitation program development began in 1975 and continued through 1978, resulting in organizational guidelines for outpatient centers (including personnel, assessment procedures, facilities and equipment, prescriptive therapeutic procedures, entrance criteria, community development, etc.), and rigid safety and quality assurance standards.

These centers are designed to serve patients with known, heart disease problems (heart attack, severe angina, by-pass surgery). The concept is one of tertiary prevention; reducing risk factors (cholesterol, smoking, sedentary behavior, weight, etc.) to prevent the incidence of second heart attack, coronary surgery, long hospital stay, etc.

Patients first undergo a history and physical examination (including exercise stress test) and a laboratory profile. After these are analyzed, patients begin treatment which involves : physical exercise (walking, jogging, aerobics, pool exercises, stationary bicycle riding, and weight training), dietary review and counseling, smoking cessation, weight control, stress management, education on heart disease, risk factors, diet, etc. Physicians, nurses, physical therapists, exercise physiologists, dieticians and psychologists are active participants in the patient's regimen.

A milestone in the cardiac rehabilitation program was to get third-party insurers to reimburse outpatient preventive care. The diagnostic part of a cardiac rehabilitation program that included a graded exercise test, laboratory work and other usual medical procedures were

readily accepted for reimbursement. However, there was reluctance with N.C. insurers to reimburse other components of the cardiac rehabilitation program, including dietary evaluation and education, psychological assessment and counseling, and exercise sessions. There is a great deal of conservatism in the health insurance industry regarding reimbursement for preventive care. In this instance, it was necessary to inform several groups of influential people (corporate medical directors, government officials) about the legitimacy and cost benefit of this approach. In turn they encouraged Blue Cross/Blue Shield and other insurers to broaden their reimbursement policies.

The development of the standards in the North Carolina Cardiac Rehabilitation Plan seemed to allay some of the fears that Blue Cross and Blue Shield had about the programs. They wanted to avoid the prospect of reimbursing "health clubs" claiming to be cardiac rehabilitation programs and uncontrolled by professional standards. These quality assurance standards were extremely helpful in convincing insurers to reimburse preventive services.

SPECIFICATION: There are currently 24 outpatient cardiac rehabilitation programs operating in the State. (Eight others are currently in the development process). These programs are strategically located in both rural and urban settings.

This proposal is directed at expanding the scope of services within cardiac rehabilitation programs to provide preventive services to individuals in medical high risk groups (hypertensives, diabetics). The proposal is an effort to reduce the incidence of high risk individuals from developing more severe chronic and/or debilitating conditions. The proposal would capitalize on existing resources (staff who are trained to provide supervised preventive care to high risk individuals, facilities), rather than develop entire new programs. It is a cost-effective way to approach secondary prevention and offers a viable opportunity to establish third-party reimbursement for preventive care.

STATE TAX CREDIT FOR BUSINESS AND INDUSTRY HEALTH PROMOTION/DISEASE PREVENTION PROGRAMS

PROPOSAL: Introduce incentive tax legislation to encourage health promotion/disease prevention programs in the workplace.

PURPOSE: To increase the number of businesses and industries in North Carolina implementing health promotion and disease prevention programs. To increase the number of employees exposed to health promotion information and activities.

BACKGROUND: With evidence accumulating that many diseases, such as heart disease, stroke, and certain cancers are caused by unhealthy lifestyles and environmental conditions, there is a growing interest in health promotion and in changing the behavior patterns and environmental factors that contribute to the deterioration of health. Business, which pays nearly half the nation's rapidly inflating health care bill, has become increasingly concerned about the "health" of its work force.

The reasons why health and the promotion of health are especially important to employers are obvious. First, the worker is an employer's most essential and valuable asset. It follows, then, that employers should be concerned about the health of their employees. Secondly, it is expensive for all employers when their work force is not in good health. The costs to employers are both direct and indirect.

The direct costs - the expense of health insurance premiums, disability claims, and life insurance premiums- are relatively easy to measure and they are dramatic. In 1980, industry as a whole paid $63 billion for insurance premiums alone. This expenditure continues to rise at a rapid rate. According to a Health Research institute survey of 507 of the 1,500 largest U.S. employers, the health care costs of respondents increased 17 percent between 1979 and 1980 and 14 percent between 1978 and 1979.

Added to these direct costs are the significant indirect costs which industry incurs from the low productivity, unnecessary absenteeism, excessive turnover, disability, premature death and early retirement that result from employees' poor health, mental stress, and accidents. Although it should be recognized that it is often difficult to assign an economic value to these losses, estimates have been established as an indication of these costs.

- Absenteeism alone is estimated to cost American industry $20 billion a year; and this figure does not include amounts spent for sick pay and health insurance.

- Economic losses in the United States from cardiovascular disease amounted to an estimated $80 billion in 1980, $26 billion in direct medical care spending and $54 billion in indirect costs.

- Hypertensive disease, exclusive of heart disease and stroke, is estimated to cost industry, at a minimum, $8-10 billion annually in medical care spending and lost output due to illness and disability.

- Alcoholic employees experience two and a half times the rate of absenteeism of other employees. Alcoholism is responsible for more than $49 billion in economic costs annually.

- The absentee rate of smokers is reported to be 33-45 percent in excess of the rate of nonsmokers, resulting in an estimated 81 million lost workdays per year. According to Marvin Kristein, an economist with the American Health Foundation, the average one pack plus per day smoker costs his/her employer between $624 and $637 per year in extra expenses, with the total economic cost of smoking to American industry running as high as $47 billion a year.

The result is a new emphasis on health promotion in the worksite based on the assumption, and an increasing amount of supportive data, that prevention will be less costly to employers and that healthy employees will bring about a reduction in direct and indirect losses.

Surveys of worksite programs indicate that there are many types of health promotion activities focusing on a wide range of health problems. Some programs are comprehensive; others are more modest efforts. The type of programming most appropriate for a particular business will depend on the nature of the industry/agency, the resources available, the employer's priorities, and the needs and interest of the employees. Programs can be developed and implemented in-house involving professional health promotion personnel, staff of medical departments, benefits officers or departments of personnel and training. Or, programs can be supplemented by or rely on the numerous voluntary, public, and for-profit organizations which offer a wide variety of services.

The worksite has unique potentials for effective health promotion programs quite distinct from similar programs conducted elsewhere. An important advantage is the regular presence of a large portion (approximately 90 million persons) of the adult population in an organized setting. Since the typical employee spends nearly 30 percent of his or her waking hours on the job, the convenience and accessibility of offering a program on site tends to enhance the activity and participation. By eliminating additional

commuting time, travel costs and the psychological barrier of having to stop at yet another place, the potential for incorporating health-promoting activities into an individual's routine is increased.

Company-sponsored programs have access to existing internal communication networks. Formally through in-house publications, and informally via word of mouth. A pro-active health message can be conveyed and reinforced to the employee population. Other advantages may include already established medical units, the accessibility of employees and health promotion personnel, peer support systems, and evaluation of individual programs. Because many employees' health benefit costs arise from dependents, there is also an opportunity for reaching outside the work-setting into the community.

Today, worksite wellness programs are expanding in prevalence, in comprehensiveness, and in sophistication. Increasingly, smaller employers, public sector employers, unions, nonprofit sector employers, and hospitals are offering wellness programs or facilitating access to community services. This phenomenon mirrors the growth in general public commitment to healthier lifestyles and concern for the escalation of medical care costs.

Although we have witnessed great expansion efforts in work-site health promotion, the comprehensive and ongoing programs still largely remain with corporate firms. Their smaller counterparts have not as rapidly followed their lead, due in part, to the cost of providing services, lack of professionals on staff, need for long term commitment, and the fact that smaller companies do not have the sheer numbers to realize great gains in investing in a program. (cost vs benefit) However, if we are to begin a state and national wellness ethic, we cannot solely rely on large corporations to take the initiative. Therefore, there is a need to provide incentives for investment in health promotion programs.

SPECIFICATION: Any corporation which implements a "qualified" health promotion/disease prevention program for employees at the worksite shall be allowed a credit against taxes imposed by the State. An amount equal to twenty-five percent (25%) of the direct costs incurred by the corporation shall be allowed. However, the credit shall not exceed one-hundred dollars ($100) per employee, per taxable year.

The term "qualified" health promotion/disease prevention program means:

1. A program which includes some form of risk identification and measurement. Risk identification can include pre-employment and periodic physical examinations;

testing for specific illnesses such as hypertension and diabetes; multiphasic screenings (a battery of tests to identify any of several diseases); and health risk appraisals (instruments that provide an individual with an assessment of current health status and a personal profile indicating the effect of certain behaviors on that individual's longevity).

2. A program which includes risk intervention and wellness courses/activities on a regularly scheduled basis. Interventions with the intent of producing changes in behavior and lifestyle habits can include lectures, classes, individual counseling sessions, support groups and self-help materials in areas such as:

- weight control
- stress management
- hypertension education
- nutrition
- smoking cessation
- fitness and exercise
- medical self-care
- accident prevention
- alcohol and drug abuse
- low back care

3. A program that is equally available to all employees. (salaried and hourly)

4. A program that is voluntary and maintains confidentiality.

5. A program that includes representative employee participation in assessing need, interest, and planning efforts.

6. A corporation which has a safe working environment.

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

February 17, 1986

The Honorable Jeff H. Enloe, Jr.
137 Old Murphy Road
Franklin, North Carolina 28734

Dear Representative Enloe:

On February 12, 1986 a meeting was held to share various perspectives on developing a model for a Statewide Health Promotion Program in North Carolina, and to draft this model in the form of a proposal to be submitted to the Legislative Research Commission on Preventive Medicine. The enclosed draft proposal is respectfully submitted as a result of that meeting.

Present at the meeting were representatives of the University of North Carolina, Local Health Directors, and the Division of Health Services, Department of Human Resources. Representatives of the University of North Carolina included Dr. Gordon DeFriese, Director of the Health Services Research Center; Dr. Michel Ibrahim, Dean of the School of Public Health; and Dr. Dale Williams, Director of the Center for Health Promotion and Disease Prevention. Representatives of the Local Health Directors Association included: Mr. Howard Campbell, Pasquotank-Perquimans-Camden-Chowan District Health Department; Ms. Denese Houston, Alexander Health Department; Ms. Judith Wright, Martin-Tyrell-Washington District Health Department; and Mr. Hugh Young, Edgecombe County Health Department. Representatives of the Division of Health Services included Dr. Georjean Stoodt, Chief, Adult Health Services Section; Mr. Leslie Brown, Assistant Chief, Adult Health Services Section and Ms. Sally Herndon Malek, Program Manager for Risk Reduction.

This proposal is aimed at reducing known risk factors for North Carolina's leading causes of death: cardiovascular disease, cancer and accidents, through a statewide distribution of effective prevention efforts. This effort can be made possible through collaborative efforts of North Carolina's public health system, the local communities and the university communities.

The interest and dedication of your Committee and of the Legislative Research Commission in selecting House Bill 1052 for study holds promise for a healthier North Carolina. Let us work together to apply the most effective strategies to reduce the high human and economic costs we pay to these major public health problems.

Sincerely,

Ronald H. Levine, M.D., M.P.H.

RHL/SHM:sm

Enclosure

cc: Howard Campbell
Dr. Gordon DeFriese
Bill Gilkeson
Denese Houston
Dr. Michel Ibrahim
Phillip J. Kirk, Jr.
Dr. Georjean Stoodt
Dr. Dale Williams
Judith Wright
Hugh Young

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

February 17, 1986

The Honorable William N. Martin
P.O. Box 21325
Greensboro, North Carolina 27420

Dear Senator Martin:

On February 12, 1986 a meeting was held to share various perspectives on developing a model for a Statewide Health Promotion Program in North Carolina, and to draft this model in the form of a proposal to be submitted to the Legislative Research Commission on Preventive Medicine. The enclosed draft proposal is respectfully submitted as a result of that meeting.

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Sincerely,

Ronald H. Levine, M.D., M.P.H.

RHL/SHM:sm

Enclosure

cc: Howard Campbell
Dr. Gordon DeFriese
Bill Gilkeson
Denese Houston
Dr. Michel Ibrahim
Phillip J. Kirk, Jr.
Dr. Georjean Stoodt
Dr. Dale Williams
Judith Wright
Hugh Young

DRAFT PROPOSAL
Submitted to the Legislative Research Commission on Preventive Medicine
February 17, 1986

Structuring the Solution: A Public Health Approach
to Health Promotion/Disease Prevention in North Carolina

I. INTRODUCTION

A. A Brief Restatement of the Problem

1) The leading causes of death in North Carolina are:

-cardiovascular disease
-cancer and
-accidents

2) These causes of death accounted for the following numbers of premature years of life lost in North Carolina in 1984:

Disease	Years of Life Lost in 1984
cardiovascular disease	110,170
cancer	92,135
accidents	82,245
TOTALS	284,545

3) Modifiable and preventable lifestyle and environmental factors contribute largely to these leading causes of death. The Centers for Disease Control estimates the following relative contributions are made to these leading causes of death.

Lifestyle Factors	Environment	Human Biology	Health Care Delivery
51%	19%	20%	10%

4) Lifestyle risk factors include, for example:

-what we eat
-whether or not we smoke
-how we maintain our weight
-what our drinking habits are
-whether we buckle our seat belts
-how we handle excess stress
-whether or not we drink and drive
-our safety practices at home and work

5) Many risk factors cannot be clearly categorized in this framework but combine elements from several categories. For example, environmental factors combine with lifestyle factors to enhance or detract from exposure to carcinogenic substances on the job. Awareness, management and control of problems such as high blood pressure, cholesterol levels and diabetes combine all four categories in varying degrees to determine risk.

B. Health Promotion Defined

In a report entitled "Criteria for the Development of Health Promotion and Education Programs" prepared by an Ad Hoc Work Group of the American Public Health Association chaired by Gordon DeFriese of the University of North Carolina, health promotion is defined:

"Health promotion is a term used to denote a wide variety of individual and community efforts encourage behavior considered conducive of health. Health promotion may involve any combination of educational, organizational, economic and environmental interventions, usually targeted toward one or more of the lifestyle behaviors considered harmful to health -- e.g., smoking, alcohol and drug misuse, inadequate/inappropriate diet, sedentary patterns in activities of daily living, high stress levels, or behaviors related to the risk of personal injury from accidents (Green and Johnson, 1983)."

II. STRUCTURING THE SOLUTION: A Public Health Approach to Health Promotion/Disease Prevention in North Carolina

A. Overview

An effective statewide health promotion program is a complex endeavor that cannot be achieved through anyone mode of delivery, by any one intervention, or by any one agency. The problems of cardiovascular disease, cancer and accidents require expertise and participation from various players to carry out a variety of planned interventions based on community need and potential for success. Thus the goal of these programs should be to reduce known risk factors related to cardiovascular disease, cancer and accidents through effective, efficient and appropriate interventions.

A statewide health promotion program would reach a variety of targets through various delivery modes. Individuals and families would be reached through the health and health-related practitioners. Organizations, networks and communities would be reached through collaborative efforts of those systems and providers. County, regional and state populations would be reached via policy, economic, environmental and media interventions.

A system to carry out these health promotion efforts statewide should be one that is centrally financed, centrally administered and locally operated in a partnership whose goal is to best meet the health related needs of the people living and working in our communities.

B. The Major Players and Their Roles

This section will describe the roles of the local health departments; the Division of Health Services of the North Carolina Department of Human Resources; the University community and the local communities in carrying out effective statewide health promotion efforts.

1. Local Health Departments

The provision of public health services in North Carolina is a function of county government. (G.S. 130A-34)

Local health departments are getting increased demands: 1) to serve as a coordinating role for community-wide efforts in health promotion and 2) to provide health promotion services particularly with underserved populations or populations and communities most at risk.

Public health departments have a track record for reaching the populations and communities most at risk. In order to improve the health of North Carolina citizens, we must not limit our focus to simply "converting the converted." Dr. James Mason, Director of the Centers for Disease Control states: "It is my observation that, up until now, most of the behavior changes we have promoted have involved the better-educated, upper-, and middle-class segments of our society. If health promotion is a good thing, it should be good for the whole society, not just that portion which is favorably predisposed. Unless we are able to reach all segments of the population, we will never meet the goals we have set for a national consciousness for wellness in America." Scarce resources should be placed where the need is greatest and where the potential for success exists.

Public health departments are in a unique position to focus on populations and communities. Many of the risk factors for heart disease, cancer and accidents are woven into the fabric of the norms of the communities. Focusing on individuals in a clinic setting is not enough; successful health promotion programs must consider not only individual behavioral risk factors but the community impact that the physical and social environment has on creating, maintaining or changing behavioral norms. Public health departments are in a position to coordinate and develop programs for and with groups where these norms are created and maintained such as the entire community, the church, the family, the work setting, clubs, etc.

Public health departments have a broad preventive mission, while other agencies may focus on treatment of diseases or on categorical problems such as preventing a particular disease or providing a specific service.

Public health departments, because of their broad mission, see the need for multiple approaches and can serve in a facilitative role with agencies that have resources and expertise to contribute to the broader efforts. Such organizations are other health care providers, local mental health agencies, school health and highway safety providers, Agricultural Extension, adult and community education and voluntary agencies such as the American Cancer Society, North Carolina Division; the American Lung Association of North Carolina; the American Red Cross; and American Heart Association of North Carolina. Local health departments could also build strong partnerships with the private sector to develop health promotion programs for employee groups, particularly for the small businesses (so prevalent across this state) that have no internal health related resources.

With appropriate resources, technical assistance and training, health departments could plan, implement and evaluate successful community based health promotion initiatives.

2. The Division of Health Services, Department of Human Resources.

The Division of Health Services in North Carolina has the authority to develop and carry out health promotion programs. Within the limits of its resources, the Division gained experience in developing and administering health promotion programs, yet the programs are not yet statewide.

Some counties receive funding from the Division. Funding Guidelines and a Performance Reporting System have been developed to distribute funds and monitor program progress. This mechanism can be adapted to fund additional programs. (See Funding Guidelines, Attached).

The Division has data collection and analysis capabilities needed for program evaluation in the State Center for Health Statistics.

The Division also has a commitment to the staff training that would be necessary to develop an effective statewide health promotion program.

The Division of Health Services should thus fund all counties at a base allocation level to develop health promotion efforts. A formula could be used to account for relevant variances in population. Additional allocations should be granted through a competitive process through the State's consolidated contracts system. This competitive process could be used to provide incentives to health departments who have met standards and are capable of effectively mounting new efforts.

Within this framework, the Division of Health Services would manage the major effort needed to train staff in local health departments (and potentially other agencies) and in developing resources for program development and delivery. For some of these services it would be necessary to contract with resources outside of the Division.

An amount of approximately $5 million on an annual basis would be necessary to develop these initiatives statewide.

3. The University Community

North Carolina has an outstanding system of public and private health, public health, and medical academic centers. Academic resources can insure the availability of much needed research and technical expertise to assist in the development, implementation, and evaluation of a statewide health promotion and disease prevention effort. For example, the University of North Carolina with its five health professional schools and Center for Health Promotion and Disease Prevention can make major contributions towards a statewide initiative.

Health promotion programs should be planned in keeping with results of the latest research; universities could provide the link for the public health system to this information.

The University community has excellent training resources that could be used to disseminate recent advancements, state-of-the-art interventions; and to build skills relevant to health promotion planning, delivery and evaluation.

Evaluative research has always been difficult for action-oriented local health departments with high demands and few resources, yet research is a primary focus of universities. The Division of Health Services could contract with the universities for assistance in evaluation of selected county health promotion efforts.

4. The Communities

Communities have perhaps the most important role to play in successful health promotion efforts.

Preventive health behaviors, (such as eating nutritious foods, getting exercise, maintaining weight, quitting smoking, drinking moderately or not at all, not drinking and driving) are often formed and maintained in response to the people and places that influence us. These people and places form our "communities". Community may be defined as "an entity for which both the nature and the scope of a public health problem, as well as the capacity to respond to that problem can be defined..." (Model Standards, DHHS). Often times the community is a town, city or county but it also may be a group of people who see themselves as a "we" or a group, such as a high school clique, expectant mothers or elderly residents of a housing complex.

Health promotion programs affect us as individuals, and for this reason, local initiative is seen as key. While government and other skilled health professionals play a facilitative role and need to ensure that initiatives are of state-of-the-art quality; it is the local community which must own and institionalize the solutions.

NORTH CAROLINA GENERAL ASSEMBLY
LEGISLATIVE SERVICES OFFICE
2129 STATE LEGISLATIVE BUILDING
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TELEPHONE: 733-2578

February 21, 1986

MEMORANDUM

TO: Phillip J. Kirk Jr., secretary of human resources;
Ronald H. Levine, M.D., state health director;
Michel Ibrahim, M.D., chairman of policy committee,
and O. Dale Williams, director,
UNC Center of Health Promotion/Disease Prevention;
Gordon H. DeFriese, director,
UNC Health Services Research Center;
Beth Joyner, president,
N.C. Association of Local Health Directors

FROM: William R. Gilkeson Jr., counsel to Legislative Research Commission's Study Committee on Preventive Medicine

RE: Getting more details about proposal of February 17

The co-chairmen of the committee have asked me to thank you for the proposal that was enclosed with the letter from Dr. Levine dated February 17. They have decided, however, that, in order to consider the proposal adequately at the March 6 meeting, the committee will need more details about its cost. Therefore, they have authorized me to ask for a fuller cost description of the proposed program than is contained in the $5 million bottom line.

Please answer the following questions:

1. You say at the bottom of Page 4 of the proposal that DHS should fund all counties at a base allocation level, and that it could use a formula to account for relevant population variances.

a. By "all counties," we assume you mean all 83 local units that have health departments. Are we correct?

b. Please spell out the formula or formulae you have in mind.

c. How much of the $5 million would be set aside for base allocation grants to the local health departments?

d. Of the base amount that would go to local health departments on a formula basis, what percentage do you contemplate would go for personnel? What percentage for equipment? What percentage for other types of expenditures?

e. The Funding Guidelines (10 NCAC 8A .1001-.1008) seem to contemplate a competitive-grant situation. Would the base-level formula grants be subject to the same application process? Would that process be a meaningful way to make local grantees accountible if each local health department would be guaranteed a base-level allocation no matter what? Could a local agency other than a health department compete with the health department for the base-level formula grant (as suggested by 10 NCAC 8A .1004 in the current Funding Guidelines)?

f. In his summary of comments to the committee meeting January 30 (copy enclosed), Dr. Ibrahim wrote of enhancing the current local public health efforts by adding "modules, or program segments." Do you contemplate that kind of module-addition in the $5 million proposal of February 17? If so, which modules do you contemplate would be added to a local health department with the base-level grant within the $5 million framework?

2. How much of the $5 million would be allocated for the competitive grants to deserving local programs? Please describe briefly the "State's consolidated contracts system" you say would handle those grants.

3. How much of the $5 million would be spent on the central administration of the program and other Raleigh operations, as distinguished from grants to local programs?

4. Of the amount spent on the central operation in Raleigh, how much would be allocated for the training of staff from local health departments or other local contractors?

5. What do you mean at the top of Page 5 of the proposal when you say "developing resources for program development and delivery"? How much of the central DHS portion of the $5 million would go for that function?

6. How much, if any, of the $5 million would go for program evaluation? How would the results of this evaluation be reported to the General Assembly?

7. Do you contemplate that any of the $5 million would go to the University Community for any of the activities described in Section 3 on Page 5 of your proposal? If so, please give a breakdown of what you intend.

8. Please provide a priority list of components of the $5 million program, with a cost figure for each component. Put the component you believe is least expendible at the top and

the component you believe is most expendible at the bottom.

Please answer these questions before the end of February. Thank you very much.

cc: Georgjean Stoodt, M.D., chief of adult health services, DHR
Leslie Brown, assistant chief
Sally Herndon Malek, program manager for risk reduction, DHR
Howard Campbell, Denese Houston, Judith Wright and Hugh Young, local health directors

North Carolina Department of Human Resources
325 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor

Phillip J. Kirk, Jr., Secretary

March 5, 1986

MEMORANDUM:

TO: William R. Gilkeson, Jr., Counsel to Legislative Research Commission's Study Committee on Preventive Medicine

FROM: Phillip J. Kirk, Jr., Secretary of Human Resources; Phil Kirk
Ronald H. Levine, M.D., M.P.H., State Health Director; Ronald H Levine MD
Michel A. Ibrahim, M.D., Dean, School of Public Health, UNC and Chairman of Policy Committee, UNC Center of Health Promotion/Disease Prevention MAI/GS
O. Dale Williams, Director, ODW/GS
UNC Center of Health Promotion/Disease Prevention;
Gordon H. DeFriese, Director, GHD/GS
UNC Health Services Research Center;
Elizabeth P. Joyner, President, EPJ/GS
N.C. Association of Local Health Directors

SUBJECT: Getting More Details about Proposal of February 17

A group representing Local Health Directors, the University of North Carolina and the Division of Health Services has met to discuss how local health promotion/disease prevention programs might best be implemented in North Carolina. This was done in response to a request for proposals made by the Legislative Research Committee on Preventive Medicine. As a result, a proposal was developed. On February 21, you wrote a memo requesting further information on this proposal. Attached is our response to your question.

This health promotion/disease prevention initiative represents an important opportunity to combat the leading causes of death in North Carolina. Thank you for seeking our thoughts. We hope they will be of help to you as you pursue this needed opportunity for North Carolina. If we can be of further assistance, please call on us.

PJK:RHL:MAI:ODW:GHD:EPJ/jdh

Attachment

Addendum to February 17 proposal entitled "Structuring the Solution: A Public Health Approach to Health Promotion/Disease Prevention in North Carolina"

The proposal entitled "Structuring the Solution: A Public Health Approach to Health Promotion/Disease Prevention in North Carolina" describes how health promotion and disease prevention services can be developed in partnership with local communities in North Carolina in order to reduce preventable mortality and morbidity from cardiovascular disease, cancer and injuries.

The proposal states that approximately five million dollars would be needed annually to develop initiatives throughout the state. Of this amount, 85%, or $4,223,500 would directly support community-based endeavors as follows. Two million dollars would be allocated such that each of North Carolina's 100 county health departments[1] would be entitled to receive $20,000 to support the assessment of the county's needs and resources for prevention of cardiovascular disease, cancer, and injuries; to coordinate resources; to develop a coordinated plan of action to prevent cardiovascular disease, cancer, and injuries; and to implement direct services or interventions as appropriate. An additional million dollars would be allocated to local health departments on the basis of a formula which considers need of the county population relative to the prevention of these health problems and to the current state and federal funding levels for relevant programs.

The local level budget would vary according to the need and the type of project undertaken. Health promotion by its nature is labor intensive as it is dependent largely upon "people skills." It is anticipated that 85-90% of funds allocated to local health departments would be spent for personnel support. The Division of Health Services (DHS) would be responsible for providing or securing current information and expertise in both the content and process of health promotion and disease prevention. A variety of process and content packages or modules are available for community and worksite health promotion program planning, implementation, and evaluation. The particular modules or program segments which might be needed by local projects would be determined by the local assessment of health related need and the priority assigned by corresponding goals and objectives. Thus it would be the responsibility of the Division's consultants to help match appropriate resources with local needs.

[1]While there are only 84 administrative units due to several counties combining the administrative responsibilities into districts, there are 100 county health departments providing services to their communities.

These three million dollars would be non-competitive. You asked how accountability could be ensured if there was a guaranteed base-level allocation "no matter what." Funds are not guaranteed "no matter what." First, submission of a plan as described in 10 NCAC 8A .1005, Item b would be required of all health departments. Further, they are subject of 10 NCAC 8A .1006 and .1007, "Monitoring and Reporting Program Performance" and "Use of Program Funds" which provide the basis by which the Division of Health Services can ensure necessary accountability. In particular, "A contractor that consistently fails to meet acceptable levels of performance as determined through site visits, review of performance reports,..., and has been offered program consultation and technical assistance, may have program funds reduced or discontinued."

On a competitive basis using criteria set forth in 10 NCAC 8A .1005, "Applications for Program Funds," $1,223,500 would be allocated to community-based endeavors. Local health departments and other agencies and organizations would be eligible to compete for these funds. As noted therein, it is particularly important that coordination of efforts with health departments be demonstrated by other agencies and organizations. These funds would provide incentives to coordinate local efforts to meet unmet needs in the prevention of the leading causes of death.

Administrative costs related to the program would be just under 10% of the total budget, or $496,500. Approximately 75% of these administrative costs would support personnel in the central and four regional offices. Over 90% of these personnel costs would support technically trained persons such as health education specialists, nutrition, fitness, and nursing consultants who would provide technical assistance and consultation to local project staff. Less than 10% would support management and clerical personnel. Approximately 25% of program administrative costs would support operating expenses including data processing for administration and program evaluation, travel, equipment, postage, telephone, and supplies.

Approximately $110,000 of program resources would be used for training and for resource development and acquisition. The funds for training would target community-based health promotion/disease prevention staff. This training and continuing education would be planned and implemented by DHS technical staff with assistance from the university community. Resources for program development and delivery include planning and implementation materials and curricula that are flexible enough to be adapted to specific local needs. For example, an existing workbook on fitness might be of excellent technical quality, but be written at too high a reading level. It would need to be modified for effective use. It is anticipated that development of some of these resources would require expertise from the university community.

An additional $80,000 would support a mass media initiative, heightening awareness of health problems and local resources to address them. This program component would be developed by DHS staff with expertise provided from the university community as well as other technical resources.

Program evaluation would best be handled by contract to an independent agency or organization, with some of the data collection being centered in the State Center for Health Statistics. The independent agency would develop the evaluation design and methodology in consultation with the Division of Health Services. It would provide technical assistance and training to the state program in developing evaluation priorities and strategies, developing and implementing program evaluation designs for funded projects, developing data collection instruments and a data management plan, and providing technical assistance and training for local health departments in the implementation of program evaluation plans and in the production of evaluation reports. Approximately $90,000 would be needed for these evaluation efforts. If desired, these could be reported to the General Assembly, perhaps in the form of a biennial report.

Your memo asked for a description of the consolidated contract system. The consolidated contract was developed to make the contracting process between the Division of Health Services and local health departments more efficient. The consolidated contract provides specific provisions and conditions which govern the contractual relationship between Division of Health Services and local health departments. Rather than having separate contracts between DHS and local health departments for each program receiving funding, all programs are consolidated into one contract. In addition to this basic document, a budget page and contract addendum summarizing specific program objectives for each program are included in the consolidated contract.

Contracts with non-health departments receiving health promotion/disease prevention programs would be negotiated between Division of Health Services and the recipient agency. The terms of such contracts would be similar to those included in the consolidated contract. These contracts would also incorporate program objectives and a budget page.

The proposal of February 17 and the anticipated expenditures for carrying it out represent the foundation of a comprehensive health promotion, disease prevention, education program throughout North Carolina as we understand the intention of House Bill 1052 to be. To answer your question regarding the expendibility of various components, we reiterate that all components of our proposal are intended to support effective community-based endeavors. Thus it would be difficult to cut back any single component. All components are interdependent and necessary for a successful program which will address the leading causes of death in North Carolina. Based on the actual amount of funds that were made available, a decision would be made as to how best to administer those funds to achieve to the greatest extent possible a comprehensive health promotion, disease prevention, education program throughout North Carolina.

GUILFORD COUNTY
DEPARTMENT OF PUBLIC HEALTH

February 17, 1986

William R. Gilkeson Jr., Staff Counsel
Legislative Research Commission
State Legislative Building
Raleigh, NC 27611

Dear Bill:

In response to your request for suggestions from members of the Legislative Study Commission on Preventive Medicine, I have the following thoughts:

1. A preventive medicine approach should focus on improving beneficial health practices throughout the entire population of North Carolina. Special attention will be needed for the elderly, our minority citizens, and the low income.

2. Health practices which will reduce deaths from heart disease, cancer, and accidents should be targeted for improvement.

3. While the objectives may be the same throughout North Carolina (i.e. reduce average cholesterol or the percent of smokers, etc.), the techniques and methods will need to vary from county to county.

4. Resources vary from county to county. Many of these resources are focused on one disease (i.e. heart or cancer society). Others are either treatment or client oriented (i.e. hospitals). Health Departments are community oriented, broad focused and mandated to promote the health of our citizens.

5. With what is proposed, accountability, monitoring, evaluation, quality assurance, technical assistance will need to be included.

6. A Proposal:
   a) Set specific health risk reduction objectives.
   b) Fund community based efforts in each county to be coordinated and administered through local health departments. Allow flexibility for these health departments to contract for services from hospitals, health agencies, YMCA, etc.
   c) Charge DHR (DHS) with the accountability and monitoring of these funds and projects.
   d) Fund DHR (DHS) with additional funds to contract for technical assistance and evaluations from the Universities.

301 North Eugene Street
P.O. Box 3508
Greensboro, N. C. 27401

e) Encourage private employer participation through tax incentives for health promotion activities.

7. Precedent has been set through the example of the school health coordinators who perform similar activities with school systems in North Carolina and utilize community resources.

Sincerely,

Joseph L. Holliday, M.D., M.P.H.
Health Director

JLH/lm

CC: Sen. Bill Martin
Rep. Jeff Enloe

AARP

NORTH CAROLINA STATE LEGISLATIVE COMMITTEE

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February 6, 1986

William Gilkeson, Jr.
Legislative Office Building
NC General Assembly
Jones Street
Raleigh, NC 27611

Dear Mr. Gilkeson:

The State Legislative Committee (SLC) of the American Association of Retired Persons was represented at the January 30 meeting of the Legislative Research Commission's Study of Preventative Medicine by Con Starin of Lenoir, a member of the SLC.

The SLC submits the following contributions in response to your request for suggestions as to how the Commission can proceed toward a meaningful report and recommendations. In accord with your comments to Mr. Starin, we will be succinct in suggesting direction and structure to bring together the myriad of activities of which Dr. De Friese spoke.

1. There should be a state agency to coordinate activities if there is to be legislation to implement a program. The Division of Health Services of Department of Human Resources seems the most logical, perhaps in conjunction with the UNC School of Public Health and De Friese' organization to provide identification of gaps (needs), R & D & evaluation.

2. The Division of Health Services is in a position to supervise selection of viable "program operators" in communities such as health departments, HSA's, or other organizations that may already have something going. It would be up to the local program operators to utilize/recruit needed services such as, were represented in several of the presentations

at the meeting. This would permit the development of a statewide preventive health "system" with enough flexibility at the local level so that accessibility and affordability would be less likely curtailed.

3. With regard to financing, some preventive programs are already operating in the private sector. With some organization, the present investment should be more effective. In addition, insurors could be encouraged to cover preventive services including filling prominent gaps.

   In addition, there may well be a need for state funds (by way of a tax on tobacco, e.g.) to insure the accessibility of services for the medically disadvantaged. Local funding and private grants might also be sought by local program operators.

These are our briefly outlined thoughts. We hope they will assist you and the Commission to develop a visible, worthwhile program available to all the people of North Carolina.

Mr. Starin is available for questions or consultation at 704-758-8451, extension 202 weekdays or 704-758-4147 after hours. His address is 903 Vista Place, NE, Lenoir, North Carolina 28645.

We wish you great success in a complex endeavor.

Sincerely yours,

Lenore P. Yow

Lenore P. Yow, Chair
North Carolina State Legislative
Committee, AARP

tc/

SYNOPSIS OF PRESENTATION TO LEGISLATIVE RESEARCH COMMISSION'S STUDY COMMITTEE ON PREVENTIVE MEDICINE NORTH CAROLINA GENERAL ASSEMBLY

by

Gordon H. DeFriese, Ph.D.
Professor of Social Medicine
and Director,
Health Services Research Center
University of North Carolina at Chapel Hill

January 30, 1986

Background

It is now well recognized that the major causes of ill health, disability and death in our society are to a significant degree associated with patterns of personal lifestyle. Conventional health care services, no matter how plentiful or how accessible, are no longer seen as sufficient for the assurance of a high and rising state of personal health. If further improvements in overall prospects for national health are to be achieved, they will be due to efforts to modify health-compromising patterns of lifestyle, not through the development of modern medical high technology.

Since the late 1970s, the concepts of health promotion and disease prevention have achieved (through their "rediscovery") a new level of concern and respectability in the context of national health policy discussions. The concern expressed by the Legislative Research Commission's Study Committee on Preventive Medicine is laudable and worthy of serious consideration. Furthermore, this inquiry takes place at a point in time when the lessons and experiences of other states and localities in pursuit of these same objectives is now becoming more readily available.

I had the personal task last year of chairing a special task force of the American Public Health Association (APHA) charged with the responsibility of summarizing part of this experience. The task force included representatives of both state and local public health agencies, as well as a wide variety of academic disciplines with expertise in the fields of health promotion and disease prevention. The APHA task force recommended that any effort to develop a health promotion initiative should address five important criteria in the process of program planning and implementation. These five criteria are:

Criterion Number 1: A health promotion program should address one or more risk factors which are carefully defined, measurable, modifiable, and prevalent among the members of a chosen target group, factors which

Criterion Number 1 (continued): constitute a threat to the health status and the quality of life of target group members.

Criterion Number 2: A health promotion program should reflect a consideration of the special characteristics, needs, and preferences of its target group(s).

Criterion Number 3: A health promotion program should include interventions which will clearly and effectively reduce a targeted risk factor and are appropriate for a particular setting.

Criterion Number 4: A health promotion program should identify and implement interventions which make optimum use of available resources.

Criterion Number 5: From the outset, a health promotion program should be organized, planned, and implemented in such a way that its operation and effects can be evaluated.

The UNC-CH Health Services Research Center, which I direct, has worked under contract to the W. K. Kellogg Foundation of Battle Creek, Michigan since 1978 as a source of evaluation and planning technical assistance to more than 25 separate community-based projects in health promotion/disease prevention involving the outlay of more than $35 million. During these several years of direct experience in this field, my colleagues and I have had an opportunity to learn quite a bit about the conditions which increase the likelihood of a successful health program. On the basis of this experience, it is our conclusion that:

- a wide variety of groups and organizations in most communities are capable of mounting such programs and sustaining their operation to the point that they accomplish their objectives.

- a number of indigenous persons exist in most communities with the requisite interest and skills to lead an effective health promotion program with minimal technical assistance and support.

- a wide variety of health promotion and disease prevention services and programs (both public and private) already exist in most communities, although in most they are unrelated to any others and cooperation among them is minimal at best.

- the stimulus for coalitional planning of targeted health promotion initiatives often must come from outside a community.

- some of the organizations and institutions with the greatest access to persons at high levels of health risk (e.g., schools and worksites) are often unlikely to take initiatives to start such programs for their clientele or employees.

- the development of health promotional programs emphasizing lifestyle-related risk factors in a setting where even basic

personal health services are unavailable may not be either appropriate or effective.

- "comprehensive" programs addressing all types of health promotion issues simultaneously are not necessarily the most effective; the alternative is a program specifically targeted to a particular risk factor or set of factors of importance in a specific population.

- it is important to the success of a health promotion program that the intended participants in such a program understand and accept the basic thrust of the program, in their own language and in their own terms, as important to their health and well-being.

The Funding of Health Promotion/Disease Prevention Programs

Health promotion and disease prevention are not exclusively either public or private sector problems. There are many diverse interest groups actively involved in health promotion and disease prevention —- it is a "business" in a very real sense. At the same time, the effort to "promote" or stimulate the development of such programs on a broad scale will require the strategic investment of special funds for this purpose, especially if the intent is to impact upon populations which are beyond the reach of most health promotion programs (i.e., the poor, minorities, the elderly).

It is also becoming clear that many private sector organizations have realized the benefits to be derived from the participation of their employees in health promotion programs, particularly those which might impact upon rates of use of personal health services. Hence, there is the potential for the joint funding of such programs (by public and private organizatons) where employees and their families are involved. In fact, in many states and localities, business and industrial organizations contribute funds for the use by local public agencies (e.g., schools) so that health promotion programs may take place.

The variety of funding approaches which have been tried suggests that it is always good to identify a coordinative organization in most communities capable of taking the lead in the development of these programs. It is in this sense that the local public health agency has been suggested, in House Bill 1052 creating the present Study Committee on Preventive Medicine, as this sort of agency. In my view, however, it would be a mistake to make formula-type allocations of funds to these agencies for this purpose. Rather, it would be important to establish criteria for eligibility for such funds and explicit expectations with regard to their use. It seems advisable to work out in advance a concept of the kind of planning process that would be expected for such initiatives and to specify the kind of target outcomes for which such programs will be expected to attempt achievement.

The University of North Carolina
Center for Health Promotion and Disease Prevention
School of Dentistry School of Medicine School of Nursing School of Pharmacy School of Public Health

SUMMARY OF COMMENTS TO LRC COMMISSION ON INNOVATIVE METHODS OF FUNDING THE HEALTH PROMOTION AND DISEASE PREVENTION EFFORT IN NORTH CAROLINA, JANUARY 30, 1986

Michel A. Ibrahim, MD, Dean, School of Public Health and Chairman, Policy Board, UNC Center for Health Promotion and Disease Prevention

At the commission's previous meeting, representatives of the UNC Center for Health Promotion and Disease Prevention provided suggestions for funding health promotion and disease prevention (HPDP) activities in the State. We now consider programs that might be helpful and how they might implemented.

One straightforward approach is to provide existing facilities, such as county health departments, the capability to implement targeted HPDP programs. Carefully developed and tested programs based on the latest knowledge and technology could be implemented with a reasonably simple system. This could be done with segments or modules that target high priority areas such as cardiovascular disease, cancer, injuries, and low birth weight with selected activities. The number of segments or modules could be limited at the outset and then expanded in the future.

A strategy for accomplishing this approach would be to use the county health departments as implementation sites. Modules or program segments would be provided in accordance with health department needs and capabilities. There should be some centralized assessment or review prior to the transfer of the module to the implementation site.

One example of such a module would be a procedure for assessing blood cholesterol levels, perhaps with some of the recently developed devices that make these measurements quickly and cheaply, based on a drop of blood obtained from a finger. The module could contain the equipment required, instructions for its use and clear procedures for referral of those patients requiring more detailed examination.

Other examples of modules and approaches can also be implemented. Further, implementation sites in addition to the county health departments could also be utilized.

Comments to Legislative Research Commission on Innovative Methods of Funding the Health Promotion/Disease Prevention Effort in North Car

January 30, 1986

By Michel A. Ibrahim, MD, Dean, School of Public Health and Chairman, Policy Board, UNC Center for Health Promotion and Disease Prevention

Senator Martin

Representative Enloe

Members of the Committee

In a previous meeting with this commission, Dr. Ronald Levine, State Health Director, described North Carolina's major health problems which included cardiovascular diseases, cancer and injuries. In that meeting, Dr. Williams, Director of the UNC Center for Health Promotion/Disease Prevention, and representatives from the five health sciences schools, suggested funding strategies for such programs. Examples of these strategies could be taxes on the sales of automobile registration, health insurance premiums, and alcohol and tobacco; as well as tax

The educational programs include mass communication, both printed and electronic, direct adult education, professional education of providers of care, youth education in schools and other facilities, and community based approaches involveing work site and medical centers.

The basic strategy is to create "a self-sustaining health promotion structure, embedded within the organizational fabric of the communities, that continues to function after the project ends". (1) The strategy emphasizes the involvement of local community groups, local ownership, and local control.

Finally, changes in deaths, disease and disability from cardiovascular diseases, changes in the knowledge and behavior of individuals and communities, changes in the risk factors for cardiovascular diseases in individuals and in the community, are evaluated through a series of population surveys and epidemiologic surveillance of communities with and without such educational programs. Comparison between these two sets of communities provide a measure of impact.

The question before us is how to translate these national experiences to North Carolina. Health

incentives to industries for providing health promotion/disease prevention programs or products. Today I would like to share with you my own experiences with national model programs for health promotion/disease prevention, to point out the community organizations and resources that would be suitable for implementing such programs, and to emphasize the role of our University at Chapel Hill in working with state resources for providing health professionals to help plan and evaluate such programs.

I have visited three national models for Health Promotion/Disease Prevention programs. These are the Stanford Five-City Project, the Minnesota Heart Health Program, and the Pawtucket Heart Health Program. These are research and demonstration projects selected by the National Heart, Lung and Blood Institute to determine the feasibility and impact of community based efforts to reduce the burdens of cardiovascular diseases. The ultimate aim of these projects is to reduce deaths, disease, and disability from the cardiovascular diseases. These objectives are achieved through educational efforts directed to increase the knowledge and change behavior of individuals and communities with regard to smoking, high cholesterol levels, high blood pressure, overweight and other factors.

promotion/disease prevention activities should be integrated in all phases of medical, dental, nursing, pharmaceutical, and public health practices in the state. All these practices to a greater or lesser extent have had a health promotion/disease prevention component. One of the purposes of the new initiative would be to strengthen such endeavors to allow the full participation of practitioners both in the public as well as private sectors. It is gratifying that the medical school at UNC has made health promotion/disease prevention activity one of its priority areas and has received a commitment from physicians in the state to work toward this end. Similar steps have been taken by the Schools of Dentistry, Nursing, and Pharmacy. The state should capitalize on this initiative by making sure that all health professionals are encouraged to employ health promotion/disease prevention measures in their own practices.

With regard to the School of Public Health and public health agencies in the state, it's clear that health promotion/disease prevention has been their major objective for several decades. Indeed it is their primary and only mission. Public Health Agencies are well situated to implement programs at the community level within their existing system of community networks.

Carefully developed and tested programs based on the latest knowledge and technology could be implemented. The programs would include efforts to control cardiovascular diseases, cancer, injuries, and low birth weight to begin with. Other activities could be added as our knowledge, and methods of intervention become known. Perhaps some emphasis could be placed on lowering cholesterol levels of the population. There are new technologies which allow the population to determine their cholesterol levels with ease and within a few moments.

Of course the capabilities of local health departments vary depending on their size and location. Some may be able to carry out the entire load, others would need some help. However, they may serve as a focal point for some activities and contract others to suitable organizations or associations for implementation. The state's Division of Health Services would play a central role in utilizing the various systems in the state to insure adequate and full coverage.

As I stated earlier in connection with the national programs, some effort must be made through epidemiologic surveillance and community surveys to determine the

effectiveness, feasibility, and cost of these programs. To this end, the University may play an important role. In a partnership with state and local groups, the University's Center for Health Promotion/Disease Prevention and its affiliated health science schools would be pleased to work with the State Division of Health Services and local organizations to develop an information system that would aid in the planning and evaluation of such programs. In addition to providing program design, planning and evaluation of impact on health state of the population, our University would of course provide health professionals who are needed to carry out such activities. These professionals of medicine, dentistry, nursing, pharmacy or public health would be needed to direct and participate in the delivery of such programs.

The role of our University then is a dual one: First, to provide the knowledge base, research design and evaluation tools so that policy makers can determine what should be funded, and second to produce the health professionals required for the operations of such programs. Through this partnership North Carolina will have an excellent mechanism for program development. Programs may be added, expanded, or deleted from the armamentarium of the state in order to provide the best possible service to most people but with reasonable cost.

In all this let me emphasize the public health/community approach to health promotion and disease prevention and its impact on various communities as well as the state as a whole. The key element is to develop programs that are embedded in the local fabric and designed to increase knowledge and change behaviors of communities. This should result in the ultimate lessening of burden of diseases, deaths and disabilities in the state as a whole.

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(1) Farquhar J. W. et al: The Stanford Five-City Project: An Overview (ch. 84, p. 1156). In Behavioral Health: A handbook of health enhancement and disease prevention. Metzarazzo et. el. edition. John Wiley & Sons, Inc., NY, NY, 1984.

Senator William N. Martin
North Carolina General Assembly
Raleigh, NC 27611

PROPOSAL FOR BETTER PREVENTIVE HEALTH CARE

I had not given very much concentrated thought to how well our health care delivery system is functioning in the area of preventative health. Based upon the information that has come to my attention, much more needs to be done in this area. There has been a great deal of discussion about preventive health and wellness, but our health care delivery system, as it currenty exists, designed to encourage prevention; it does perform quite well in the area of treatment. As a result of my examination of the existing situation, I would make two primary recommendations:

1. that the State encourage and support the creation of strategically located health screening centers; and

2. that the manner in which the State regulates the insurance industry be modified to the extent that prevention is encouraged.

The issue of health care cost containment has been the subject of much discussion and some action in North Carolina; yet I do not believe we have fully realized the extent to which a lack of sufficient emphasis on prevention could reduce the cumulative figure for treatment cost. It is my opinion that we should spend more on prevention and, by doing that, we will spend less on correcting problems that could have been either avoided or reduced in severity.

The central premise of my recommendations is the existence of data that can:

1. identify health care problems that occur with a relatively high frequency in North Carolina;

2. identify certain high-risk groups that are more likely to encounter those problems;

3. identify health care procedures that are likely to prevent, control or reduce the more serious consequences and occurrence of those problems; and

4. educate and inform North Carolinians of the preventive options and corrective options available to them.

What are some things we can do that makes the best use of such data? I propose that the State seek to identify health care facilities throughout the state and located so as to be reasonably accessible to the general population -- preferably these facilities should include hospitals that are under-utilized. After identifying these facilities, challenge grants should be offered to cover costs of diagnostic equipment, supplies and promotion (and possibly

certain other costs) if they will agree to be available to the public as a "Health Care Screening Center." As a Health Care Screening Center, the facility would be expected to offer health risk appraisals, education and general information relative to nutrition, physical fitness, stress reduction, and certain specific health conditions such as cardiovascular problems, cancer, maternal and infant health, and injury prevention. The facilities would offer certain diagnostic testing such as cholesterol measurement, body fat composition, blood pressure, non-invasive or minimally invasive cancer examination, and other similar procedures. Additionally, the facilities would be sources for referral and, where appropriate, treatment. The services would be available at no charge or for minimal charge. Not only is there benefit for the general public (access to available information and expertise), the State (a more healthy citizenry and, presumably, long-term monetary savings) and the insurance industry (presumably, long-term monetary savings), the health care facilities will benefit through higher visibility, potential access to a larger patient population and better utilization of facilities.

In the area of insurance regulation, I would propose that measures be taken that would result in insurance coverage being more readily available for screening and diagnostic procedures as part of general physical examinations relative to high-risk conditions in targeted high-risk patients. These measures should be taken through regulation or legislation -- whichever would be most appropriate. I have no doubt that many conditions remain undiagnosed until they have progressed to a stage where treatment is the only course available and even then the probability of success is substantially diminished. I contend that primary reasons for non-diagnosis is that the patient is not educated to the existence of his or her condition, nor to the consequences of failing to take preventive measures and to undergo the types of examination procedures likely to reveal any associated problems. I would further contend that another barrier to proper diagnosis is the fact that the diagnostic procedures are too often not covered by insurance until the specific condition is already causing problems. Early diagnosis often means less prolonged treatment and recovery, and less cost; prevention clearly leads to the same result.

I, therefore, recommend legislation -- with adequate appropriations -- that will address the needs set out above.

Bill Martin

N.C. SOCIETY FOR PUBLIC HEALTH EDUCATION

TESTIMONY TO N.C. LEGISLATURE STUDY COMMISSION

ON PREVENTIVE HEALTH CARE

January 30, 1986

I am Margaret Pollard - President Elect of the N.C. Chapter of the Society for Public Health Education and I am speaking on behalf of that professional organization. As a professional organization we represent health education practitioners across the state of N.C. in a myriad of health care settings: these include practitioners in local and state health departments, rural and urban primary care centers, mental health agencies, hospitals, agriculture extension programs, voluntary agencies (such as American Heart Association, Lung Association, Cancer Society), health planning agencies, public school systems and private industries (including large industrial companies and insurance companies).

Traditionally, our prime professional concern has been <u>prevention</u> and. we would be supportive of almost any initiative by the legislature to further the goals of preventing the onset of early morbidity and mortality for the people of North Carolina. In that regard, we applaud the North Carolina General Assembly in establishing this study commission and express our appreciation in being invited to address you today. The establishment of the commission is timely in view of recent legislative action by the

United States Congress. The impending consequences of that action (specifically the Gramm, Rudman, Hollins Bill) bodes ill for federal initiatives in disease prevention and health promotion. Your wisdom in establishing this commission is apparent since more responsibility will likely be shifted to the states. Through the efforts of your study commission and subsequent recommendations to the full legislature, North Carolina citizens can be spared many of the results of federal cutbacks.

Our purpose in addressing you today is not to present statistical data pointing to the existing need for disease prevention and health promotion initiatives (for that evidence is abundant and will likely be cited in other testimony). Rather, we call your attention to some general principles we offer for your consideration in formulating recommendations and subsequent initiatives the General Assembly of North Carolina may consider enacting.

These principles we think are vital to the health and well-being of the citizens of North Carolina and are the result of observations and assessments by health education professionals across the state from previous experiences with disease prevention and health promotion programs. The lessons from those experiences are loud and clear and offer the opportunity of avoiding the perils of repeating past mistakes.

What then are some of those lessons and resulting principles we propose:

1) New initiatives in HP/DP should: <u>specify goals and objectives that are realistically matched with sufficient resources to</u>

reasonably achieve the desired outcomes and within a time frame to realize some impact on the problem(s) addressed). Many past programs have expected dramatic results from a meagre amount of resources. Likewise, they have frequently expected immediate or short term results to long term, complex and entrenched problems that have evolved over generations. Thus, any gains expected will be incremental rather than dramatic and long term rather than immediate.

2) New initiatives should be realistic as evidenced by findings from evaluative research, experience, and community acceptance. Many professionally sound initiatives simply have not worked because they were incompatible with existing community norms and values or were contrary to perceived benefits and costs as determined by those for whom the program was intended.

3) New initiatives should require coordination of effort from existing local agencies and organizations. Few single agencies have the personnel and resources to solo in a community setting and demonstrate much of an impact. Cooperative agreements, shared personnel and systemically planned efforts that address problems on multiple levels can expect much more impact than can singly directed efforts. The nature and extent of the existing problems with high risk and hard to reach populations require maximizing of resources irrespective of sources and organizational boundaries.

4) New initiatives should look beyond traditional health agencies

and organizations as possible sources of innovation. For example, churches and fraternal organizations have the capacity to reach literally hundreds of thousands of North Carolinians, many of whom have little or no contact or confidence in the health care establishment. Many organizations have an interest in health promotion and disease prevention and recognize the needs, they simply lack the resources to develop interventions. Some of the more successful and innovative programs have been developed by organizations like Agricultural Extension Service, YMCA's and YWCA's, neighborhood organizations, women's health cooperatives, churches, etc.

5) New initiatives should address the needs of the population across age, race, ethnic, sex, geographic (urban and rural) segments. Too frequently, programs are initiated to the exclusion of rural, poor and minority populations. Developmental phases and the complete life cycle should be considered in the development of new initiatives. The elderly, young adults and the school age population between the ages of 6-12 are most frequently ignored in health promotion and disease prevention programs. The private sector has not ignored some of those age groups (for example, young adults) and is reaping enormous ~~profits~~. access

6) New initiatives should consider psychological and social health promotion and disease prevention. Homocides, violence to self and others is widespread. Psychological and physical abuse in

many forms is becoming epidemic among some population segments. Sexual abuse and exploitation must also be considered from a preventive and health promotion perspective. Traditional mediating social structures (i.e., family and church) are unable to adequately deal with the problem. Legal enforcement is too late to serve a preventive function and too frequently exacerbates the problem.

7) New initiatives should address organizational, environmental and policy issues which may be associated with or casually> related to a problem. Efforts can not be directed sorely at individuals and expect them to change to reduce risk of disease and promote health when greater impact can be realized by requiring changes in the physical environment, the work environment, or the living (social) environment.

8) New initiatives should support research efforts in multiple forms ranging from basic epidemiological, social and behavioral research to evaluative research which examines and assesses the application of new knowledge in natural settings (e.g., community, school, worksite, etc.). Support is needed to facilitate the communication of ever growing new knowledge to practitioners for earlier application. Attention to the identification of researchable problems growing from practice requires renewed emphasis to develop closer linkages between the researcher and the practitioner.

9) New initiatives should include the criteria of institutionaliza-

tion and replicability. Too frequently, demonstration and pilot efforts cannot be replicated in other settings due to a lack of resources at the level demonstration or pilot efforts were implemented. Similarly, in too many instances new initiatives prosper during elevated funding periods from external sources and wither and die when those resources are no longer available. A central funding requirement for any new initiatives should include a plan for developing alternative sources of funding, ideally from community sources to continue the initiative. Monitoring the institutionalization plan would become a central part of an ongoing evaluation process.

Finally, NCSOPHE supports the intent of Sen. Martin's "Proposal for Better Preventive Health Care". The first recommendation "that the State encourage and support the creation of strategically located health screening centers" we hope Sen. Martin would give equal attention to follow-up since that aspect has been the least effect with previous screening programs. We would also hope that the screening center would be coordinated with a variety of other community resources to reach those individuals and groups not normally reached. Sen. Martin's second recommendation, that the force of State regulation be applied to the insurance industry to encourage coverage of preventive services, we support.

Caution: Duplication of Health Dept. screening clinics

Thank you.

TESTIMONY

of

NORTH CAROLINA NURSES ASSOCIATION

to

LEGISLATIVE RESEARCH COMMISSION'S
STUDY OF PREVENTIVE MEDICINE

By

Hettie L. Garland, RN
President

Thursday, January 30, 1986
STATE LEGISLATIVE BUILDING

I am Hettie Garland, president of the North Carolina Nurses Association, the professional organization for registered nurses. We appreciate the opportunity to speak to the members of this committee on a topic whose time has been too long in coming--health promotion and disease prevention.

A variety of speakers at the December meeting of this study committee presented testimony supporting integration of health promotion activities in both the public and private sectors. The case has been made for the long-range benefits of a health promotion and disease prevention focus. Our dilemma is how to pay for it, since 95% of our health care dollars historically have been spent on illness and disease, and little on prevention.

Our purpose today is to share with you some very pertinent information on (1) the role of the registered nurse in disease prevention and health teaching;

(2) the great resource available in the large number of these health care providers; and,

(3) the impact that can be made by appropriate use of registered nurses in a program of disease prevention and health promotion.

The nursing profession historically has focused not only on treatment of the sick but also on prevention of disease. A common mental image of the nurse is a white-clad figure at the hospital bedside, but in truth nursing today is practiced more and more outside the hospital. Our statutory definition of nursing mentions "caring, counseling, and teaching" foremost, and it mentions prevention of illness, injury, and disability before it mentions managing these ailments. Teaching about one's health and early intervention to minimize poor health experiences is the focus of nursing. Unlike some other health professions, nurses do not have to "switch gears" to become promoters of health. Preventive health care has been a hallmark of professional nursing practice for many years. Primary care nurses first of all provide nursing care, and their practice includes: prevention of disease; promotion and maintenance of health; assessment of health needs and identification of risk factors; treatment of stress; long-term nursing management of chronic illness; care of the aged and referral of clients to other resources.

Let us look at the state's resource of registered nurses. There are more than 43,000 RNs currently licensed and residing in North Carolina. This number includes many nurses specially trained in early detection, health promotion, and patient counseling and teaching. There are public health nurses, school nurses, family nurse practitioners, geriatric nurse specialists, certified nurse midwives, psychiatric-mental health clinical specialists, diabetic teaching nurses, cardiac teaching nurses, hypertension teaching nurses, and the list goes on and on. We believe you can look to nursing--the largest of the health professions--as a major resource in any effort to enhance the health status of North Carolinians.

There are many ways in which the expertise of nurses can be better utilized to improve the health status of our citizens. There is abundant

research that shows, for instance:

Nurse practitioners achieve better control of obesity and hypertension in their clients when compared with physicians;

Nurse practitioner clients have fewer emergency room visits or visits to physicians, an increase in return to work, a decrease in use of medications and in laboratory and prescription costs;

Consumers of nurse midwifery services have fewer premature births and lower neonatal mortality;

Nurse managed clinics show dramatic reductions in blood glucose levels of diabetics, reduced diastolic blood pressure of hypertensive clients, and a 50 percent reduction in hospitalization;

Patients in homes and nursing homes receiving care by nurse practitioners are hospitalized less frequently;

Nurse practitioners do significantly more extensive health education and follow-up than physicians;

The point is that there is ample documentation that nurses achieve outcomes that reduce the cost of health care to society and prevent costly high-tech interventions. We depend, for instance, on public health nurses primarily to safeguard the community's health by providing the health eaching, early detection, and treatment to those populations to whom traditional care is not available. Nearly 65% of public health workers in this country are nurses. Without them we would never have controlled many of the dreaded communicable diseases. Nurses have a proven track record as health care providers as well as sickness care providers. Without nurses we will not be able to successfully mount a comprehensive health promotion program.

The committee should look to certain target populations as we try to make some impact with a health promotion/disease prevention program. There are several arenas where nurses are particularly qualified to deliver health promotion/disease prevention oriented care to large population segments.

Children in our school system are one such target group. Some school nurses are already in place and are excellent resources to implement a health promotion program aimed at establishing healthy lifestyles to avoid costly treatment for illness. This is where we need to focus a lot of our attention. Many adult health promotion programs have been tried and abandoned in part because it is extremely difficult to attempt a change in adult lifestyles to make them healthier people. Children, however, are still in the learning process, their health habits still in the developing stage and they need to be channeled at an early age to make wiser choices. Every public school in this state should have adequate school nurse services.

There is a special population group - the elderly - whose health care needs are taxing the health care system greatly. Nurses are the one group

of providers who can make a difference in the cost of services to the elderly and to human services programs financing care delivery to this group. Again, the health education element of the nursing role is a key to health promotion and disease prevention.

The health care system is locked into a medical model of health care for the elderly, yet their primary health care needs are those related to the care and services provided by nurses. Registered nurses represent the most geographically accessible and disease prevention oriented of all health professionals. Nurse specialists such as clinical specialists in gerontology and family nurse practitioners are qualified to render primary health care services. The conclusion is obvious that it is more cost-effective to use nurses for primary health care involving nursing care, health promotion and management of non-complicated health problems, while leaving more complex medical care to physicians.

A primary barrier to utilization of this resource is the present reimbursement system's nonrecognition of nurse providers. Nurses services, when reimbursable, can play a major role in disease prevention and health promotion for the elderly as well as other population groups.

"An ounce of prevention" is worth more than a pound of cure especially when looking at health care during pregnancy. While we have to maintain financial support for tertiary care for babies born too small, too soon, and to those with physical abnormalities, we must increase our support of prenatal programs aimed at preventing such tragedies. The need for adequate health care supervision and monitoring during pregnancy is well documented and the result of that kind of health care is better pregnancy outcomes. When looking at available funds for appropriations to maternal and child health care services, it is incumbent upon legislators to remember that prenatal care - including health education by qualified nurses - promotes improved pregnancy outcomes and to support that care with dollars.

In this same vein, it is important to note that the preferred provider of some consumers for childbirth services is the certified nurse midwife (CNM). Impressive evidence shows successful cost saving outcomes with major reductions in prematurity and neonatal mortality from nurse midwifery care.

Again, current reimbursement barriers prevent the consumer from taking advantage of the services of this qualified health care provider. This includes lost savings to the state employee health plan and the medicaid program which currently do not reimburse nurse midwives.

At your December meeting, several presenters attested to the new wave of health promotion, disease prevention activities developing in industry. The vast majority of these activities are - and have been - conducted by occupational health nurses. Registered nurses and nurse specialists - such as nurse practitioners - have developed a role in industry over the years to provide primary health care services to employees at great cost savings to businesses. More recently, "sick rooms" in these industries have evolved into "employee health centers" and programs like those you heard described last month are leading to lifestyle changes for health -- a

better understanding of dietary choices to control hypertension, an appreciation for a routine exercise regimen, an understanding of the life-saving benefits of seat-belt use, etcetera.

This wellness orientation in private enterprise is a step in the right direction. In North Carolina, however, we have many very small industries who cannot afford a full-time health care provider conducting an on-site employee health program. There are dual reimbursement barriers in the current system: (1) wellness services are not currently reimbursable to any health care provider; and, (2) registered nurses are not recognized health care providers in the reimbursement system. The simple fact is, cost-effective providers will not be utilized to their maximum potential as long as these reimbursement barriers exist.

How, then, to finance a comprehensive program of health promotion? The funds have to come from either public or private sources. In the allocation of public funds, serious consideration must be given to more investment in prevention rather than in expensive treatment for the victims of the lack of that care. Examples of programs that merit greater public investment are:

(1) Increased health promotion and screening services to school-age children;

(2) Adequate prenatal care such as the care given by nurse midwives, especially for teenagers and the disadvantaged; and,

(3) Health education and maintenance services to non-institutionalized elderly, such as community nursing centers.

In the private sector, encouragement must be given to the purchasers of health insurance to participate in preventive health care. This can be done by making such participation a requirement for the premiums to be tax deductible. The proposed Child Health Incentives Reform Plan (CHIRP) at the federal level provides such an incentive by requiring businesses to include children's preventive health care in their employee health plans as a requisite to make insurance premiums tax deductible. Some other form of tax incentive could be considered for the industry that provides health promotion programs for its employees and their families.

A tax return check-off could be offered to taxpayers who wish to contribute to a comprehensive statewide health promotion program, publicly funded.

The for-profit nursing home industry could be offered reimbursement incentives or tax incentives for providing health promotion programs for well elderly in the community.

But first of all, we must make the choice of using more of our health care dollars to buy prevention, rather than paying for the illness and injury resulting from apathy to the long-term benefits of health promotion.

NORTH CAROLINA
NURSES ASSOCIATION

Hettie L. Garland, R.N.
President
Frances N. Miller
Executive Director

February 4, 1986

Bill Gilkeson, Staff
LRC Study on Preventive Medicine
Legislative Office Building
Room 545
300 N. Salisbury Street
Raleigh, North Carolina 27611

Dear Bill:

As promised, I am enclosing the NCNA recommendations for consideration by the Study Committee on Preventive Medicine. These are lifted directly from testimony presented by NCNA President Hettie Garland at the January 30 meeting of the committee.

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A tax return check-off could be offered to taxpayers who wish to contribute to a comprehensive statewide health promotion program, publicly funded.

The for-profit nursing home industry could be offered reimbursement incentives or tax incentives for providing health promotion programs for well elderly in the community.

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I have enclosed a bibliography of references Ms. Garland referred to at the close of her testimony. These resources cite the cost effectiveness of nurse providers in advanced practice. Some committee members had requested to see the bibliography so I trust that you will forward it to them.

Finally, an article by Frances Miller, NCNA Executive Director, re: "Nurse Providers: A Resource for Growing Population Needs", is enclosed. This article was included in the 1985 January/February issue of Business and Health. It speaks to how expanded use of nurses in the work place and community can be a cost-effective measure. Feel free to share copies with the committee if you feel it appropriate.

Bill, I hope this will assist you as you prepare a summary of recommendations from all presenters for the committee's consideration on March 6. If I can be of assistance to you, please call.

Sincerely,

Hazel

Hazel G. Browning, RN, MSN
Associate Executive Director

HGB/db

Enclosures

CHARLES A. COOK, M.D., M.P.H.
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February 19, 1986

William Gilkerson, Jr.
Staff Council
Legislative Research Commission/
Preventive Health
Legislative Office Building
Jones Street
Raleigh, North Carolina
27602.

Dear Mr. Gilkerson:

Please find attached two documents that I feel are very important to any discussion of prevention in North Carolina. The document "THE STATUS OF BLACK NORTH CAROLINIANS" is one that outlines the cause for alarm and concern for the Old North State Medical Society as we see the attempt to practice more prospective/previntive medicine take shape.

I would like to remind all viewers that health as defined as, free of illness or immediate risk of illness, is not uniform in this State. I would like to note that the lower one-third of the socio-economic stratum accounts for fully 60% of the chronic disease morbidity and mortality, by definition, preventable. Thus although blacks are over-represented in the category of poor, one must recognize that a large number of white fall into this category and will benefit greater from strategies of prevention that impact upon blacks than they will benefit from program "mainstreaming".

only document included in LRC report

The second document is an abbreviated proposal to get the philosopy of community intermediaries on the discussion table. I would hope that this will prompt some considerations of alterative approaches to accessing the community. Traditionally Black Colleges and Universities are excellent institutions to fulfill the roll of intermediary along with church and other groups.

Sincerely,

Charles A. Cook

PRESIDENT, ASSOCIATED RESOURCES CONSULTING GROUP

Proposal
For Historically Black Colleges and Universities To
Participate in Health Promotion Programs in the Black Community

The intent of this proposal would be to make funds available to be used by historically black colleges and universities to develop and implement projects focusing upon the barriers, both physically and psychologically, that face the black community in accessing and obtaining good medical care and good health. The goals of the project would be:

1. To increase awareness of the major issues facing the black community as it relates to health; economics, and their impact upon health; education, and its impact upon health; and social issues and their impact upon health, and the health status of the black community.
2. To develop a strategy to address major issues at the state and local levels of government as well as through private initiatives that would impact positively upon the health status of the North Carolina black community.

NATURE AND SCOPE OF THE PROJECT ACTIVITY

The funds will be used to:

1. Inventory the specific health needs of the black community
2. Identify and evaluate existing community resources to address those needs.
3. Formulate strategies to commit public and private resources in order to bring about affirmative changes in those negative health indices. Applicants, all historically black colleges and universities of North Carolina, would qualify to conduct a thorough examination of health, social and econonic issues facing the black community, with emphasis on those that impact greatly upon health, access to health and health care in North Carolina.

FUNDING

It is proposed that funds be made available to the Adult Health Services of the Department of Human Resources to carry out these studies and to participate in the studies as technical advisors to the projects as funded. The applicants would address the following areas:

Background and Need: This would describe the applicants' understanding of the project, requirements, issues, objectives, special considerations and any interactions required to achieve project goals.

Project Objectives: This will describe how the applicant will develop and implement the project objectives, and the resources and networking that will be pursued in order to accomplish the objectives. A detailed plan of specific intervention strategies which are to be formulated, how those proposed strategies will be evaluated, and how those proposed strategies will be shared and duplicated across the state would be an inclusive of the expected objectives.

DISCUSSION

It is certainly without question that black institutions and colleges in the State of North Carolina have trained and educated the overwhelming majority of blacks in this state. These educated individuals will come from homes that have an attachment to those institutions solely because favorite sons have been educated at the institution, teach at that institution, or have some other noteworthy identification with institutions across the state. Most of these institutions can act as intermediaries without the restriction or limitation of suspicion that oftentime will cloud the presence of other entities who claim that they want to impact upon the black community in an affirmative manner. Areas that could be studied and evaluated include, but are not limited to: a study of the welfare system and its impact upon the black community, a study of how to access black teen-age pregnancy and child-birth as a health issue, factors that impact upon crime and its occurrence in the black community as a public health issue, and a review and evaluation of the impact of expenditures made for health promotion programs, specifically geared to the black community.

This program, if undertaken, would certainly be one that is sure to prove cost-effective. The funding would be very modest in terms of outlay. The return to be realized would have tremendous impact upon the future of health care in this state and also would provide additional insight into strategies that may be replicable as national models.

North Carolina General Assembly

House of Representatives

State Legislative Building

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REP. JEFF H. ENLOE, JR.
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APPROPRIATIONS EXPANSIONS BUDGET COMMITTEE ON GENERAL GOVERNMENT
CORPORATIONS
ELECTION LAWS
MILITARY AND VETERANS AFFAIRS
STATE PERSONNEL
TRANSPORTATION

February 20, 1986

Dr. Ron Levine
North Carolina State Health Director
P. O. Box 2091
Raleigh, North Carolina 27602

Dear Dr. Levine:

I have just reviewed the proposal developed jointly by the UNC Center for Health Promotion, the Department of Human Resources and the N.C. Association of Local Health Directors (provided by Bill Gilkeson of our Legislative staff) for a strong North Carolina statewide disease prevention and health promotion program; it appears to be a very sound approach and I am sure it will receive serious consideration by our Committee.

I think it is fair to say, however, that, unless a realistic and feasible avenue for funding is presented for consideration by the time of the Committee's next meeting, this proposal, commendable as it is, may not be able to be implemented. It would be a formidable, though not impossible, task to secure an annual appropriation of $5 million or so to support the program described in your proposal.

In observing the recent legislative consideration of the North Carolina Insurance Premium Tax, it has come to my attention that one major health insurer is accorded a significantly discounted rate and, if I am not mistaken, the General Assembly has heretofore failed to assess the state's rapidly-expanding HMO's even a slight premium tax. May I ask you to look into this to see if the imposition of a small tax on this segment of the health insurance industry would raise sufficient revenues to fund an effort such as that envisioned by our committee? A successful program of this nature might well reduce, in time, such companies' claims experience; it might be well for you to consult with Insurance Commissioner James Long on this.

Please make every effort to provide me with the results of your study by the end of the month. Thank you very much.

Sincerely yours,

Jeff H. Enloe, Jr.

JHE,jr./nzm